

# **ABOUT MERS**

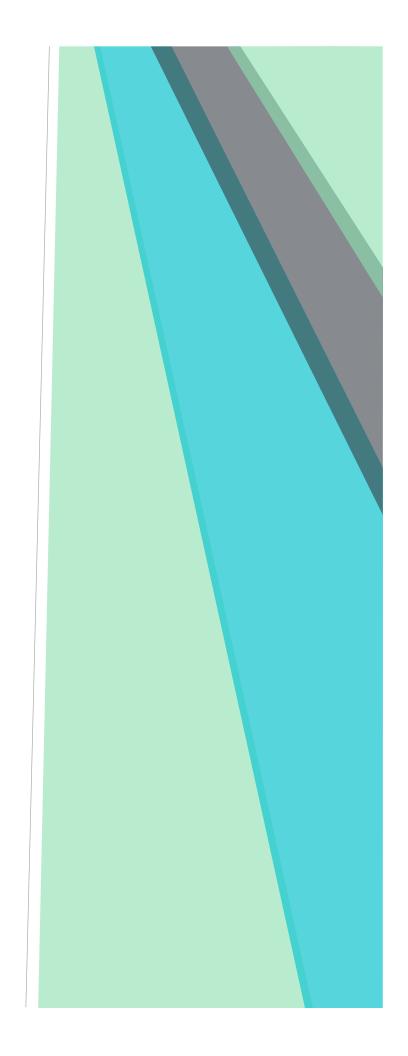
The Municipal Employees' Retirement System (MERS) of Michigan exists to provide quality retirement and related services with cost-effective plan administration for members and beneficiaries. We are an independent public nonprofit organization that has partnered with Michigan municipal organizations for more than 65 years, helping them deliver on their promise of a retirement for their employees.

# BUILDING SUCCESS TOGETHER

CHRIS DEROSE – Chief Executive Officer LEON E. HANK – Chief Financial Officer

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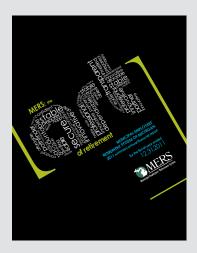
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# INTRODUCTORY SECTION

# A Foundation of Success

Our priority is building on our partnership with our municipalities, and by working together, we all become stronger. We are dedicated to building on that partnership together, through the foundational principles that guide our System.

# **2012 ACHIEVEMENTS**







## Certificate of Achievement for Excellence in Financial Reporting

MERS received the Certificate of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association for the December 31, 2011 Comprehensive Annual Financial Report. This marks the 24th consecutive year MERS has received this honor.

#### Public Pension Standards Award in 2012

MERS also received the Public Pension Coordinating Council (PPCC), Public Pension Standards Award in 2012, in recognition of meeting the professional standards for plan design and administration as set forth in the Public Pension Standards. This award is presented by the PPCC, a confederation of the National Association of State Retirement Administrators (NASRA), the National Conference on Public Employee Retirement Systems (NCPERS), and the National Council on Teacher Retirement (NCTR).

#### Municipal Employees' Retirement System



#### Letter of Transmittal, May 8, 2013

#### **Dear Board Members:**

We are pleased to submit the Comprehensive Annual Financial Report (CAFR) for the Municipal Employees' Retirement System (MERS) of Michigan for the fiscal year ending December 31, 2012.

"Building Success Together" is the theme for this year's publication. As you will see throughout this report, our priority is building on our partnership with our municipalities. By working together, we all become stronger.

As a measure of that strength, our retirement trust fund at year-end held \$7.7 billion, the highest amount in our history. This makes us more cost-effective for the nearly 800 municipal organizations we partner with, and a stronger System for the almost 100,000 public employees and retirees we serve throughout Michigan.

We are dedicated to building on that success together, through the foundational principles that guide our System:

#### A Tradition of Service

MERS was created in 1945 by the Michigan Legislature as a statewide voluntary organization. We provide system administration and are an investment vehicle for local governmental entities throughout Michigan, including cities, counties, townships, medical care facilities, road commissions, authorities, villages, and tribal governments.

In 1996, the Michigan Legislature separated MERS from state government. MERS started its independent status with just under 500 employer members. Today, we partner with nearly 800 local governments all across the state. MERS offers retirement options including the MERS Defined Benefit Plan, MERS Defined Contribution Plan and MERS Hybrid

Plan (a combination of defined benefit and defined contribution). MERS also offers a menu of benefit provisions through a variety of trusts, which may be adopted by member employers to create benefit plans or fund benefits for their employees. Each employer has a trust account in the System, and one municipality's assets are never used to fund the pension obligations of another. All trust funds are co-mingled for investment purposes only, but MERS maintains separate accounting records for each municipality. The MERS Retirement Board serves as the fiduciary of the funds and has oversight responsibilities for the System.

#### A Commitment to Accountability

Michigan law requires the Retirement Board to prepare an annual report in accordance with U.S. Generally Accepted Accounting Principles (GAAP). This annual report provides financial information to meet that requirement. The MERS management team, under the oversight of the Retirement Board, is responsible for the preparation, integrity, and fairness of the financial statements and other information presented in this report. As a part of our financial statement process, all necessary internal controls are identified and in place to ensure that transactions are authorized, assets safeguarded, and all supporting records are properly retained and managed. We have an Internal Auditor on staff to help ensure we meet high standards for internal control.

Michigan Law also requires the Retirement Board to arrange for an annual audit of the MERS financial statements. Andrews Hooper Pavlik PLC, MERS external auditor, conducted an independent audit of the financial statements in accordance with U.S. Generally Accepted Auditing Standards and Governmental Auditing Standards. This audit

is described in the Independent Auditor's Report in the Financial Section that follows this letter. MERS management provides the external auditors with unrestricted access to records and staff.

This CAFR is divided into five sections: Introductory, Financial, Investment, Actuarial, and Statistical. The Introductory Section outlines the System's services and structure; the Financial Section contains the Management's Discussion and Analysis (MD&A), which is the MERS management team's narrative and overview of the financial statements. This Transmittal Letter is designed to supplement and complement the MD&A. The two documents should be read together to get a thorough overview of MERS' financial condition. The Investment Section reports investment activities and performance information; the Actuarial Section contains the actuarial assumptions and methods, as well as the Actuary's Certification Letter. The Statistical Section provides various schedules on member data and 10-year trends.

#### Prudent Investment

The world financial markets improved significantly during the year providing positive returns for the year ending December 31, 2012. The MERS portfolio earned a gross return of 11.39%, and placed MERS in the top quartile for performance for the last 10-year period according to the State Street Universe of public funds. Information regarding the investment managers and returns are found in the Investments Section. This strong performance in the financial markets, plus a significant inflow of assets from new municipalities joining MERS, increased the size of the MERS fund from \$6.6 billion to \$7.7 billion, an increase of 17%.

Many municipal governments are providing more participant directed account benefits for their employees, and MERS has innovated and expanded our benefit offerings in recent years to meet our members' needs. Our menu of participant directed plans includes: the MERS Defined Contribution Plan, 457 Supplemental Retirement Program, and Health Care Saving Program. These programs are designed to help members take an active role in planning for the future, with invested accounts they manage. In 2012, the assets in these plans grew by \$84 million to \$450 million in total assets, a growth rate of 23% for the year.

Building Success Together" is the theme for this year's publication. As you will see throughout this report, our priority is building on our partnership with our municipalities. By working together, we all become stronger.

MERS also offers employer funding vehicle programs, the Retiree Health Funding Vehicle and Investment Services Program, innovative ways to help our member municipalities pre-fund benefit liability by providing access to MERS investments. These programs also experienced excellent growth in 2012, with assets growing by \$103 million to \$413 million in total funds, a growth rate of 33% for the year.

#### A Devotion to Advocacy

There were several new statutes passed by the Michigan Legislature in 2012 and signed into law by the Governor that impact public pension funds like MERS or our municipal employers, members and retirees. We have actively advocated on behalf of our members on legislation, to share their voice with local and federal legislators. Some of the legislation that impacted our members in 2012 includes:

Public Act 347 established new investment guidelines for public pension funds, generally

allowing state and local government pension funds more flexibility in selecting global funds and alternative investment strategies. The changes will increase MERS' ability to shift investments to maximize returns and increase the performance of the investment pool.

Public Acts 466, 506 and 507, generally known as the "Road Commission Best Practice Bills," provide requirements for local governments receiving road-funding monies. With these new acts, most local governments will need to implement certain pension reforms, including defined benefit pension multiplier reductions and changes in calculating final average compensation for pension benefits, or comply with the health insurance reforms in Public Act 152 of 2011, the Publicly Funded Health Insurance Contribution Act. It is important to stress that an entity has the option to choose between the two reform options and does not need to comply with both. We offer a number of pension and health care products designed to help municipal organizations meet the requirements of the new law.

Public Act 436 is the state's new emergency manager law. The new law allows additional local government involvement in cases where the State appoints an emergency manager to oversee a financially challenged municipality. Under the law, a Chapter 9 bankruptcy filing is also an option available to seriously troubled local governments. MERS offers municipalities a number of options to help reduce pension costs and help limit the amount of unfunded liability exposure.

Public Act 597 offers a partial income tax exemption for public pension retirees who are not eligible to receive Social Security Benefits. The amount of the exemption is based on the age of the retiree. A chart showing the tax impact on retirees is available on our website.

At the federal level, we have been actively involved in shaping the new GASB (Government Accounting Standards Board) financial reporting standards. Standards No. 67 and 68 detail new financial reporting

standards for pension plans and the municipal governments that participate in them. MERS representatives have publicly testified before the GASB, submitted written testimony, and served as a field tester for the new standards. In December 2012, the GASB appointed a 17-person national Pension Accounting & Financial Reporting Implementation Guide Advisory Committee. A MERS staff member was appointed to the committee and will continue to be active in helping our municipalities and their auditors implement the new standards.

#### **Actuarial Funding Update**

A measure of a municipality's funding progress is the ratio of its actuarial assets to actuarial accrued liabilities. Using this measure, most MERS municipalities remain well funded and many are very well funded. The most recent MERS actuarial valuation is as of December 31, 2011. On that date, the average funding ratio of all 706 individual MERS municipalities was 81%. This includes:

- 107 municipalities (15% of all Defined Benefit Plan and Hybrid Plan municipalities in MERS) funded at 100% or higher
- 313 municipalities (44% of all municipalities) funded at 80% or higher.
- 491 municipalities (70% of all municipalities) funded at 70% or higher.

#### Key 2012 Initiatives and Highlights

We continue to build success by focusing our initiatives in two key areas: reducing costs for our members and reducing the costs of the System.

With the goal of being more efficient and providing excellent service the Information Technology (IT) department worked in a number of key areas to improve their operation. They implemented several changes in 2012 and will continue with more into 2013, all with the goal of strengthening service to our members. Much like our municipal members, we continue to look at ways to reduce our operating costs and keep them as low as possible for our

members. This allows us to maximize their invested funds. In 2012, we were able to reduce our planned administrative costs by \$1.5 million. We've improved efficiencies elsewhere, as well. The MERS Service Center handled nearly 40,000 member calls and replied to more than 3,600 email inquiries from our employers and participants in 2012. With our continued focus on Service Excellence, nearly 80% of calls that come into the Service Center are resolved at the first point of contact.

#### Standards of Excellence

We continually strive to keep our standards at the highest level to ensure stability as a leader among our peers. We are honored that for the 24th consecutive year, the Government Finance Officers Association (GFOA) awarded MERS its Certificate of Achievement for Excellence in Financial Reporting award for our 2011 Comprehensive Annual Financial Report. This report must satisfy both generally accepted accounting principles and applicable legal requirements. The MERS Summary Annual Financial Report (a reader-friendly, condensed version of the CAFR) is an easy-to-understand financial summary of our operations. We also received the GFOA award for this report.

A complete copy of the CAFR is provided to the Governor, the members of both State House and Senate, and the Office of the State

Treasurer, as required by law. The CAFR and Summary Report are available on our website.

#### Acknowledgements

We are very grateful to our Board members for your tireless dedication that makes it possible for MERS to continue "Building Success Together" with our employers, members and retirees. Your conscientious oversight and diligence of our system is exemplary. On behalf of all MERS members, thank you for your dedication to public service. We also express our deep gratitude to the entire MERS staff for their hard work and dedication to ensure the successful operation of MERS including the completion of the 2012 Annual Audit and Comprehensive Annual Financial Report two months ahead of prior years. Our staff uses innovation, skill and a commitment to service every day to ensure the security of a retirement plan for all our members. Keeping MERS running as a strong organization also requires outstanding organizations and advisors who work in partnership with MERS to ensure our continued success. We also thank these talented firms and individuals for their work on our members' behalf.

Respectfully submitted,
Chris DeRose, Chief Executive Officer
Leon E. Hank, CPA, Chief Financial Officer

#### Municipal Employees' Retirement System



#### Letter from the Chairperson, May 8, 2013

#### **Dear Board Members:**

On behalf of the MERS Retirement Board, it is my pleasure to present the 67th Comprehensive Annual Financial Report (CAFR) of the Municipal Employees' Retirement System (MERS) of Michigan for the fiscal year ended December 31, 2012. This financial report provides information on the status of our Retirement System.

The most important decision you make as a
Retirement Board is to select our Chief
Executive Officer to run MERS day-to-day.
I am very pleased to highlight this year that we have hired an exceptionally seasoned CEO,
Mr. Chris DeRose, for this challenge.

The 2012 MERS Annual Meeting was held at the Amway Grand Plaza Hotel in Grand Rapids with a great turnout of member delegates, guests and staff. During the business meeting, the delegates duly elected Mr. Philip LaJoy, Canton Township Chief Administrator, and Ms. Lori Newberg, Ingham County Employee Services Coordinator, each to a three-year term on the Board beginning January 1, 2013. Mr. LaJoy will serve as the officer member and Ms. Newburg as the employee member. At the January 2013 Board meeting, the Board appointed Mr. John Ogden, retired City of Port Huron Finance Director, to a three-year term as the retiree representative on the Board. In addition. Mr. Michael Gilmore was appointed as a public professional member of the MERS Board, taking the seat vacated by Bruce Johnson. He is Director of Investment

Management for Greene Wealth Management in East Lansing. The Board is delighted to have these fine individuals serve the System and I extend my sincere congratulations to each of them. In addition, at the January 2013 Board meeting, Mr. Michael Brown, Barry County Administrator, was elected to serve as the chairperson, and Ms. Sally Dreves,

Grand Traverse County Human Resources Technician, was elected as chairperson pro tem. The most important decision you make as a Retirement Board is to select our Chief Executive Officer to run MERS day-to-day. I am very pleased to highlight this year that we have hired an exceptionally seasoned CEO, Mr. Chris DeRose, for this challenge. We are indeed fortunate to have Chris at the helm, given his extensive experience in running two other large pension funds, his executive skills in both the government

and private sector, and his passion for public service. As MERS positions itself to become an even stronger partner to our current and future members, we will benefit from Chris' leadership and guidance.

As a Retirement Board, the integrity of our investment process is of utmost concern to us, especially with the global market turmoil. In the past year, the world and U.S. economies were marked by considerable volatility with the ongoing unrest in the Middle East, the U.S. presidential election, the fiscal cliff and European monetary challenges. Despite the instability, MERS had a very good return of 11.39% in its portfolio for the year. Contributing factors included low interest rates, corporate earnings increases, rising auto sales, and the housing market slowly coming back. Each

year the Board reviews the MERS Investment Policy along with the Investment Management Plan. The goal is to assure we meet the proper risk targets and to preserve and maximize the long-term growth of the System's assets. Every five years we also complete a full asset allocation study. These controls and your dedication to our investment stewardship keep our standards at admirable levels.

Annually, MERS surveys the membership for ways to improve the System. Overall the staff receives high marks for the level of service they provide. Using various benchmarks as comparison to other public systems, MERS receives high scores in administering retirement plans and related products. The staff works diligently to find the appropriate

solutions to meet our members' needs. I am very proud of our staff's competence and dedication to our members.

In closing, I would like to take this opportunity to thank the members of the Board and the staff for their unwavering commitment to provide expertise and professionalism to our members. It has been my pleasure to serve as MERS chairperson. As I leave my position as your chairperson, I am proud to have played a role in the growth of MERS and "Building Success Together."

Sincerely,
Larry Opelt, Outgoing Chairperson
MERS Retirement Board

# MERS RETIREMENT BOARD AND CHIEF EXECUTIVE OFFICER



Back row from left to right: Philip LaJoy, Amy Deford, James R. Wiersma, Chris DeRose, John Ogden, Randy Girard

Front row from left to right: Michael Brown, Lori Newberg, Sally Dreves, Michael Gilmore

Officer Members: Michael Brown - Chairperson, Randy Girard, Philip LaJoy

**Employee Members:** Sally Dreves, Lori Newberg, Amy Deford **Public Members:** Michael Gilmore, James R. Wiersma

Retiree Member: John Ogden

# **MERS OFFICERS**

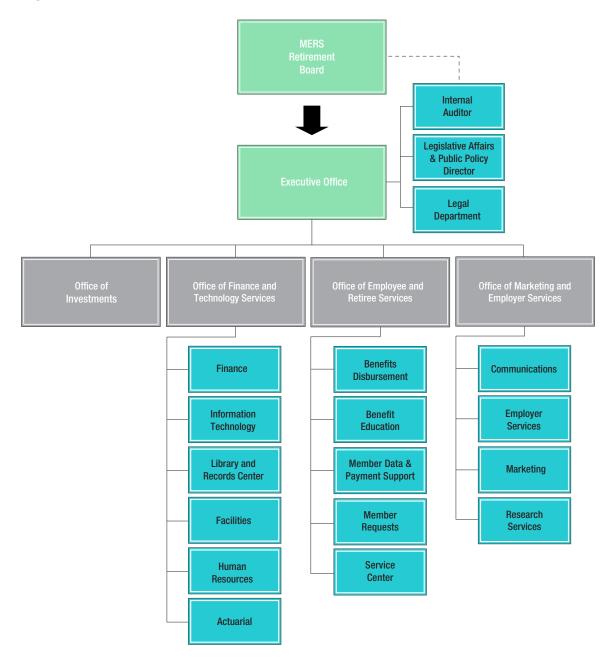


#### From left to right:

Debra Peake Carrie Lombardo Chris DeRose Leon Hank Jeb Burns

# MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF MICHIGAN

Organizational Structure – 2012



#### **OUTSIDE PROFESSIONAL SERVICES**

#### **Professional Consultants**

#### **Auditors**

Andrews Hooper Pavlik PLC Mark Jasonowicz, CPA, PLLC

#### **Human Resource Advisors**

Gallagher Benefit Services, Inc.

#### Investment Custodian

State Street Bank and Trust Company

#### Legal Counsel

Elizabeth Schwartz Ice Miller, LLP

Miller, Canfield, Paddock & Stone, PLC Reinhart Boerner Van Deuren S.C.

#### Legislative Consultants

Karoub Associates Michigan Legislative Consultants

#### Medical Advisor

Consulting Physicians

#### Security Lending Agent

State Street Bank and Trust Company

#### Systems Implementation and Maintenance

Epicor Software Corporation HTC Global Services, Inc Innovative Communications, Inc. Logicalis

Maner Costerisan

Presidio Networked Solutions

Pro-Tech Cable

Resources Global Professionals

Summit Technologies Tegrit Financial Group

#### Third-Party Administrator

Tegrit Administrators, LLC

#### **Investment Managers**

#### **Domestic Equity**

AMBS Investments
BRC Investment Management
C.S. McKee
Downriver Capital Management
EAM Investors

Hellman Jordan Irving Magee

Kennedy Capital Management

Mellon Capital Morgan Dempsey Punch Investments Seizert Capital

Wellington Management

#### International Equity

Acadian Asset Management

BlackRock

Driehaus Global Growth

Hexam

Mountain Pacific Advisors

#### Fixed Income

BlackRock C.S. McKee Credit Suisse

First International Advisors

Janus Oak Street Orchard Global

Reams Asset Management

TCW Funds

#### High Yield

Stone Harbor Stone Tower

#### Overlay

Clifton Group

#### Real Estate

The Townsend Group Hancock Timber Urdang Capital Management

#### **Private Equity**

AlpInvest Partners Credit Suisse Mesirow Financial

#### Commodities

Cargill Risk Management Mount Lucas

#### **ACKNOWLEDGEMENTS**

The MERS Comprehensive Annual Financial Report (CAFR) for the fiscal year ended December 31, 2012, was prepared by the Office of Finance and Technology Services. Special thanks to the individuals who contributed significant amounts of time and energy to help complete this report. Preparation would not have been possible without their efforts.

#### Office of Finance and Technology Services

Betsy Waldofsky, Finance Director
Luke Huelskamp, Senior Finance Manager
Courtney Overfield, Accounting Analyst
Danielle Grice, Accounting Analyst
Jen Wyble, Office Administrator
Karen Butka, Administrative Assistant
Robin Towsley, Accounts Payable Coordinator

#### **Additional MERS Staff**

Ana Carlson, Senior Graphic Designer, Office of Marketing & Employer Services

Betsy Schaeffer, Digital Print and Mail Services Supervisor, Office of Marketing & Employer Services

Don Shell, Senior Communications Coordinator

Claudia Konieczny, Investment Analyst, Office of Investments

Jen Mausolf, Marketing/Product Development Director, Office of Marketing & Employer Services Karen Strickland, Office Administrator, Office of Investments

Lisa Bond Brewer, Communications Director, Office of Marketing & Employer Services

Mike Schrauben, Investment Officer and Portfolio Manager, Office of Investments

Mike Charette, Senior Investment Officer & Portfolio Manager, Office of Investments

Paul Vangilder, Intern, Office of Investments

Peter Wujkowski, Investment Officer and Portfolio Manager, Office of Investments Richard Taylor, Print Production Specialist, Office of Marketing & Employer Services

Special thanks are also extended to Andrews Hooper Pavlik PLC, Tegrit Administrators, and Tegrit Financial Group.

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# A Commitment to Accountability

We are committed to promoting fiscally sound policies, in our business practices and also to our members and participants. As trustee and fiduciary of the MERS Plan, the Board has the duty to operate on behalf of municipalities for the exclusive benefit of retirees, beneficiaries and participants.



#### ANDREWS HOOPER PAVLIK PLC

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#### Independent Auditors' Report

Retirement Board Municipal Employees' Retirement System of Michigan

#### **Report on the Financial Statements**

We have audited the accompanying financial statements of the Municipal Employees' Retirement System of Michigan, which comprise the statement of plan net position as of December 31, 2012, and the related statement of changes in plan net position for the year then ended, and the related notes to the financial statements.

#### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### **Opinion**

In our opinion, the financial statements referred to above present fairly, in all material respects, the plan net position of the Municipal Employees' Retirement System of Michigan as of December 31, 2012, and the changes in plan net position for the year then ended, in conformity with accounting principles generally accepted in the United States of America.

#### **Other Matters**

Report on Summarized Comparative Financial Information

We have previously audited the Municipal Employees' Retirement System of Michigan's 2011 financial statements, and we expressed an unmodified opinion on those audited financial statements in our report dated June 29, 2012. In our AUBURN HILLS | BAY CITY | GRAND RAPIDS | GREATER LANSING | MIDLAND | SAGINAW

opinion, the summarized comparative information presented herein as of and for the year ended December 31, 2011 is consistent, in all material respects, with the audited financial statements from which it has been derived.

#### Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, Schedule of Funding Progress, and Schedule of Employer Contributions be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

#### Other Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements as a whole. The Schedule of Administrative Expenses; Schedule of Investment Expenses; Schedule of Payments to Consultants and Services; and the Introductory, Investment, Actuarial, and Statistical Sections are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The Schedule of Administrative Expenses, Schedule of Investment Expenses, and Schedule of Payments to Consultants and Services are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the Schedule of Administrative Expenses, Schedule of Investment Expenses, and Schedule of Payments to Consultants and Services are fairly stated in all material respects in relation to the basic financial statements as a whole.

The Introductory, Investment, Actuarial and Statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

#### Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated May 8, 2013, on our consideration of the Municipal Employees' Retirement System of Michigan's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Municipal Employees' Retirement System of Michigan's internal control over financial reporting.

andrews Looper Farlik PLC



### MANAGEMENT'S DISCUSSION AND ANALYSIS

This narrative overview and analysis of MERS financial condition for fiscal year ended December 31, 2012, is presented in conjunction with the Chief Executive Officer's and Chief Financial Officer's Letter of Transmittal. The Financial Section is comprised of the Independent Auditor's Report, Management's Discussion and Analysis, two basic financial statements with explanatory notes, two required supplementary schedules with explanatory notes and three supplementary expense schedules.

# FINANCIAL HIGHLIGHTS

The following financial highlights occurred during the fiscal year ended December 31, 2012:

- Total net position for the Defined Benefit Plan, Defined Contribution Plan, Health Care Savings Program, Retiree Health Funding Vehicle, 457 Program, and Investment Services Program increased by 17% during 2012. MERS finished the year with \$7.7 billion in net position, \$1.1 billion higher than the previous year.
- Investment returns saw a gain of 11.39%.
   The 10 year return of 8.06% remains on target with MERS expected investment rate of return of 8%.
- MERS' most recent actuarial valuation dated December 31, 2011 showed 491 of MERS 706 municipalities, funded 70% or better with 107 municipalities being over 100% funded. The average funding ratio of all 706 MERS municipalities was 81% at the latest valuation date based on the actuarial value of assets.
- Administrative expenses increased slightly by 2% in 2012 to \$26 million in a year when MERS grew significantly and brought in 131 new municipal programs. This increase is significantly lower than previous years' administrative expense increases reflecting stronger cost control measures implemented in 2012.
- Investment expenses totaled \$18 million.
   This is a 6% decrease from 2011 primarily due to lower investment manager fees.
- Total annual retirement benefits paid to retirees and beneficiaries increased \$63 million to a total of \$599 million.



#### **Basic Financial Statements**

This discussion and analysis is intended to serve as an introduction to MERS financial reporting which has the following components:

- 1. Statement of Plan Net Position.
- 2. Statement of Changes in Plan Net Position.
- 3. Notes to Basic Financial Statements.

The "Statement of Plan Net Position" and "Statement of Changes in Plan Net Position" provide the current financial condition of each of the MERS products.

The "Comparison Statement of Plan Net Position" and "Comparison Statement of Changes in Plan Net Position" presented in the Management's Discussion and Analysis provides a comparative summary of the financial condition of the System as a whole with the prior year results.

#### Required Supplemental Information

- 1. Schedule of Funding Progress.
- 2. Schedule of Employer Contributions.
- 3. Notes to the Schedules of Required Supplementary Information.

The "Schedule of Funding Progress" shows the progress MERS has made in accumulating sufficient assets to pay future retirement benefits when due. The schedule sets forth the actuarially funded status of the Defined Benefit Plan with historical trends in funding.

The "Schedule of Employer Contributions" shows the current annual employer contributions and the historical trend of employer contributions. From a long-term investment perspective, these schedules provide a better understanding of the changes over time in the funded status of the Plan.

#### **Supplementary Expense Schedules**

- 1. Schedule of Administrative Expenses.
- 2. Schedule of Investment Expenses.
- 3. Schedule of Payments to Consultants.

The expense schedules summarize all expenses associated with administering the Defined Benefit Plan.

# Comparison Statement of Plan Net Position (Dollars in Thousands)

	As of Dec. 31, 2012	As of Dec. 31, 2011	Increase (Decrease) Amount	Increase (Decrease) Percent
Assets				
Cash and Short-Term Investments	\$47,926	\$104,658	\$(56,732)	(54%)
Receivables	945,682	346,165	599,517	173
Interfund Receivables	305	276	29	<u>11</u>
Loans	3,932	3,816	116	3
Investments, at fair value	7,634,304	6,533,652	1,100,652	<u>17</u>
Invested Securities Lending Collateral	618,756	771,418	(152,662)	(20)
Other Assets/Prepaids	285	223	62	28
Net Capital Assets	8,508	7,300	1,208	17
Total Assets	9,259,698	7,767,508	1,492,190	19
Liabilities				
Purchase of Investments	893,464	370,788	522,676	141
Securities Lending Collateral	620,739	776,696	(155,957)	(20)
Administrative and Investment Costs	10,197	6,250	3,947	63
Interfund Payables	305	276	29	11
Total Liabilities	1,524,705	1,154,010	370,695	32
Net Position-Restricted for Pension and Health Benefits and Investment Accounts Held for Others	\$7,734,993	\$6,613,498	\$1,121,495	17%

# Comparison Statement of Changes in Plan Net Position (Dollars in Thousands)

	Year ended Dec. 31, 2012	Year ended Dec. 31, 2011	Increase (Decrease) Amount	Increase (Decrease) Percent
Additions				
Contributions	\$996,946	\$451,524	\$545,422	121%
Investment Net Income Investing Activities	746,132	136,531	609,601	446
Investment Net Income-Securities Lending	3,759	2,900	859	30
Miscellaneous Income	94	446	(352)	(79)
Total Additions	1,746,931	591,401	1,155,530	195
Deductions				
Benefits	598,752	536,168	62,584	12
Special Expenses and Fees	71	444	(373)	(84)
Transfers and Forfeitures	760	150	610	407
Administrative Expense	25,853	25,289	564	2
Total Deductions	625,436	562,051	63,385	11
Net Increase (Decrease)	1,121,495	29,350	1,092,145	3721
Net Position-Restricted for Pension and Health Benefits and Investment Accounts Held for Others				
Balance Beginning of Year	6,613,498	6,584,148	29,350	0
Balance End of Year	\$7,734,993	\$6,613,498	\$1,121,495	17%

#### Analysis of Plan Net Position

The plan net position increased by \$1.1 billion over the previous fiscal year primarily due to investment returns of \$750 million and new municipalities joining MERS contributing \$477 million in assets, including \$467 million in new assets added when the City of Flint and Hurley Hospital joined MERS. MERS is a voluntary statewide program with new municipalities joining every year.

The overall employer and employee contributions increase of \$545 million in 2012 was chiefly due to new municipalities joining the retirement system. Some municipalities also had fluctuations due to changes in required actuarial contribution rates resulting from salary adjustments, plan modifications, and the number of employees. Regular employee contributions are increasing as a percentage of pay relative to employer contributions.

MERS had capital assets, net of accumulated depreciation, of approximately \$8.5 million, mostly comprised of software and computer servers needed to run the System's pension administration and financial programs.

MERS has no long-term liabilities. The bulk of MERS liabilities at year-end are related to investment purchases that did not settle until early in 2013, accrued administrative and investment expenses, and securities' lending collateral.

#### **Investment Activities**

The performance of the Total Market Fund was favorable when compared to the benchmark over the past 10 years. The gross return of 11.39% was above the 8% actuarial return assumption target for the year. For both the five- and 10-year periods, the gross returns were 2.84% and 8.06% respectively,

which compared unfavorably to the actuarial return assumption for the five-year return and favorably for the 10-year return. Net investment gains (net appreciation in fair value, less investment administrative expenses, plus securities lending income) were \$750 million for the year. A further detailed analysis of investment returns is in the Investments Section.

MERS investments are managed to control the extent of downside risk that assets are exposed to while maximizing long-term gain potential. This positions the System to limit the impact of adverse market conditions. Portfolio diversification by asset class and style is an important element of investment risk control.

Investment activity is governed by the "prudent person rule." The "prudent person rule" establishes a standard for all fiduciaries that includes anyone who has authority with respect to the System. The "prudent person rule" states that fiduciaries shall discharge their duties solely in the interest of the System's participants and beneficiaries with a degree of diligence, care, and skill that a prudent person would ordinarily exercise under similar circumstances.

The "prudent person rule" permits the Board to establish an investment policy based on certain investment criteria, and allows for the delegation of investment authority to professional investment managers. Investment constraints are outlined, including the appropriate degree of risk. Investment managers are hired to execute the investment policy. They have full discretion for investment decisions within statutory authority, Board policy, and their respective guidelines. A list of investment managers under contract with MERS as of December 31, 2012, is in the Investments Section. A summary of the total System's assets is on page 65.



### **Funding Status**

A pension plan is well funded when it has sufficient assets invested to meet all expected future obligations to participants. The greater the level of funding – the larger the ratio of assets to actuarial accrued liability. While the plan is not totally funded, annual contributions are being made at an actuarially determined rate to reach full funding. There is no single all encompassing test for measuring a retirement system's funding progress and current funded status. However, some common indicators that a retirement system has achieved progress in funding its obligations include: observing the changes over time of the ratio of valuation assets to actuarial accrued liabilities, and the pattern of the unfunded actuarial accrued liability as a percentage of active payroll. These ratios and numbers are in the Required Supplementary Information.

The MERS Retirement Board has adopted a funding methodology for the System to achieve the following major objectives:

- Develop level required contribution rates as a percentage of payrolls
- Finance benefits earned by present employees on a current basis along with paying the current portion of the unfunded accrued liability
- Accumulate assets to enhance benefit security
- Produce investment earnings and interest on accumulated assets to help meet future benefit costs
- Estimate the long-term actuarial cost of proposed amendments for the System's provisions
- Assist in maintaining the System's long-term financial viability

The actuarial method for calculating the accrued liability for all plans is entry age normal with the objective of maintaining employer contributions approximately level as a percentage of member payroll. A detailed discussion of the funding method is in the Actuarial Section.

MERS is an agent multiple-employer retirement system that pools assets of the participating employers for investment purposes, but maintains separate trusts for each individual employer. Each municipality is responsible for its own plan liabilities; a municipality cannot borrow from another municipality's account to pay for pension expenses. A measure of a municipality's funding progress is the ratio of its actuarial assets to actuarial accrued liabilities.

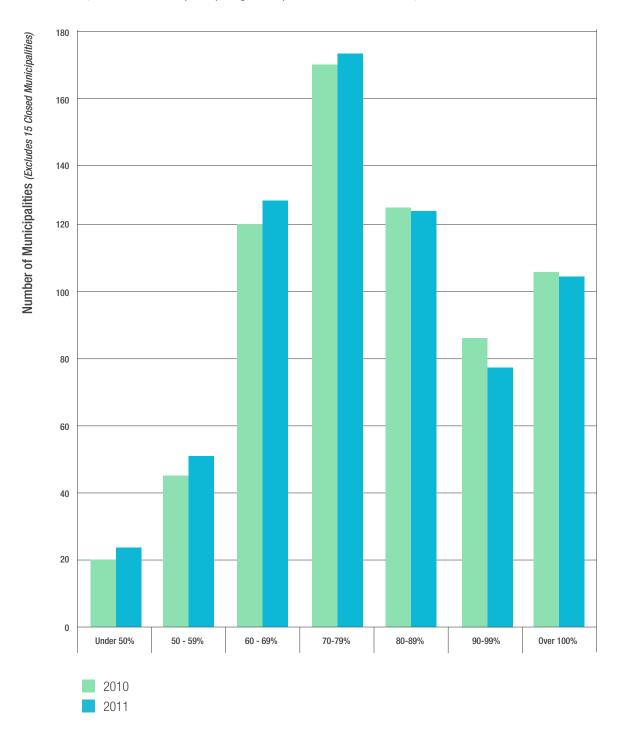
The most recent MERS actuarial valuation is as of December 31, 2011. On that date, the average funding ratio of all 706 individual MERS municipalities was 81%.

Funded Level	Number of Municipalities	Percentage of all Defined Benefit and Hybrid Plans
		,
100% or higher 80% or higher	107 municipalities 313 municipalities	<u>15%</u> 44%
70% or higher	491 municipalities	70%
60% or lower	84 municipalities	12%
50% or lower	27 municipalities	4%

As a trend, the average funding ratio was 83% in 2010, and 82% in 2009. MERS partners with our local governments to determine the best retirement fit for each municipality, to offer cost-reducing strategies, and to provide fiscal best practices.

<sup>1</sup>Historically, MERS has reported the combined funding ratio of the System. This ratio is calculated using the grand totals of all assets and liabilities of each MERS individual plan added together. For December 31, 2011, that ratio is 72.6%. The comparable ratio for 2010 was 74.5%. Calculating this ratio provides less meaningful comparative value to an agent multiple-employer plan.

Distribution of Funded Percentage of Actuarial Accrued Liability among the 706 participating municipalities as of December 31, 2011 and the 700 participating municipalities as of December 31, 2010



Statement of Plan Net Position as of December 31, 2012 (Dollars in Thousands)

	Defined Benefit	Defined Contribution	Health Care Savings Program
Assets			
Cash and Short-Term Investments	\$45,094	\$493	\$335
Receivables			
Employer and Member Contributions	32,583		
Sale of Investments	826,559	10,325	8,104
Investment Income	16,085	201	158
Loans		3,887	
Interfund Receivables	305		
Other	61	10	
Total Receivables	875,593	14,423	8,262
Investments, at fair value			
Fixed Income	2,113,892	26,408	20,728
Equities	2,940,447	36,734	28,832
Private Equity	511,582	6,391	5,016
Commodities	363,501	4,541	3,564
Cash Equivalents	439,152	5,486	4,306
Mutual Funds		283,703	1,871
Real Estate	407,652	5,093	3,997
Total Investments	6,776,226	368,356	68,314
Invested Securities Lending Collateral	618,756		
Prepaid Expenses	214		
Capital Assets, at cost,			
net of accumulated depreciation	8,508		
Total Assets	8,324,391	383,272	76,911
Liabilities			
Purchase of Investments	824,524	10,299	8.084
Securities Lending Collateral	620,739	2, 22	-,
Forfeitures and Reserves			30
Administrative and Investment Costs	6,674	5	
Interfund Payables	-,-	104	7
Total Liabilities	1,451,937	10,408	8,121
Net Position-Restricted for Pension and Health Benefits and Investment Accounts Held for Others	\$6,872,454	\$372,864	\$68,790

The accompanying notes are an integral part of these Financial Statements

Retiree Health	Investment	457	Total Year	Total Year
Funding Vehicle	Services Program	457 Program	Ended Dec. 31, 2012	Ended Dec. 31, 2011
VEHICLE	Flografii	Flografii	Dec. 31, 2012	Dec. 31, 2011
\$1,841	\$37	\$127	\$47,927	\$104,658
			32,583	36,181
48,970	995	717	895,670	295,263
953	19	13	17,429	14,721
		45	3,932	3,816
			305	<u>276</u>
			71	157
49,923	1,014	775	949,990	350,414
105.054	0.545	1 004	0.000.001	0.140.000
125,254	2,545	1,834	2,290,661	2,140,682
174,230 30,313	3,540	2,551	3,186,334	2,707,333
21,538	616 438	445 316	554,363 393,898	629,612 314,806
26,021	529	381	475,875	125,922
20,021	329	5,858	291,432	237,529
24,154	491	353	441,740	377,767
401,510	8,159	11,738	7,634,303	6,533,651
401,010	0,100	11,700	618,756	771,418
			214	66
			217	00
			8,508	7,301
453,274	9,210	12,640	9,259,698	7,767,508
,	0,	,		-,
48,849	993	715	893,464	370,788
40,043	330	710	620,739	776,696
		3,488	3,518	-
		5, 100	6,679	6,250
62	1	131	305	276
48,911	994	4,334	1,524,705	1,154,010
\$404,363	\$8,216	\$8,306	\$7,734,993	\$6,613,498

Statement of Changes in Plan Net Position for the Year Ended December 31, 2012 (Dollars in Thousands)

	Defined Benefit	Defined Contribution	Health Care Savings Program
Additions			
Contributions and Transfers In			
Employer Contributions and Other	\$783,292	\$24,931	\$10,742
Plan Member Contributions	73,133	17,169	
Total Contributions and Transfers In	856,425	42,100	10,742
Investment Income			
Net Appreciation/Depreciation in Fair Value	580,402	37,367	4,498
Interest Income	56,802	709	557
Dividend Income	44,237	553	434
	681,441	38,629	5,489
Less Investment Expense	16,702	120	116
Net Investment Income Before Securities			
Lending Activities	664,739	38,509	5,373
Security Lending Activities			
Security Lending Income	4,805	60	47
Security Lending Expenses			
Borrower Rebates	470	6	5
Management Fees	866	11	9
Total Securities Lending Expenses	1,336	17	14
Net Income from Security Lending Activities	3,469	43	33
Total Net Investment Income	668,208	38,552	5,406
Miscellaneous Income			
Total Additions	1,524,728	80,652	16,148
Deductions			
Benefits	565,235	18,532	1,787
Special Expenses and Fees	71		
Transfers and Forfeitures	460		300
Administrative Expenses	24,412	759	144
Total Deductions	590,178	19,291	2,231
Net Increase/Decrease	934,550	61,361	13,917
Net Position-Restricted for Pension and Health Benefits and Investment Accounts Held for Others			
Balance Beginning of Fiscal Period	5,937,904	311,503	54,873
Balance End of Fiscal Period	\$6,872,454	\$372,864	\$68,790

The accompanying notes are an integral part of these Financial Statements

Retiree Health Funding Vehicle	Investment Services Program	457 Program	Total Year Ended Dec. 31, 2012	Total Year Ended Dec. 31, 2011
\$78,809	\$700	Φ0.170	\$898,474	\$376,358
78,809	700	\$8,170 8,170	98,472 996,946	75,166 451,524
70,009	700	0,170	330,340	401,024
31,568	689	88	654,612	64,330
3,365	68	49	61,550	53,475
2,621	53	38	47,936	37,890
37,554	810	175	764,098	155,69 <u>5</u>
990	23	15	17,966	19,164
36,564	787	160	746,132	136,531
285	6	4	5,207	4,151
28	1		510	<u>526</u>
51	1	1	939	725
79	2	1	1,449	1,251
206	4	3	3,758	2,900
36,770	791	163	749,890	139,431
115,579	1,491	8,333	1,746,931	591,401
13,071	106	21	598,752	536,169
10,071	100	21	71	444
			760	149
521	11	6	25,853	25,289
13,592	117	27	625,436	562,051
101,987	1,374	8,306	1,121,495	29,350_
302,376	6,842	-	6,613,498	6,584,148
\$404,363	\$8,216	\$8,306	\$7,734,993	\$6,613,498



# 1. Reporting Entity and Plan Description

The Municipal Employees' Retirement System (MERS) of Michigan is an agent multiple-employer, statewide public employee pension plan that has helped provide retirement plans for municipal employees for more than 65 years. MERS was established by the Michigan Legislature under Public Act 135 of 1945 to provide pooled retirement plans specifically for Michigan municipalities on a voluntary basis. This Act was repealed and replaced by successor Municipal Employees' Retirement Act of 1984 (PA 427), as last amended by 2004 PA 490, embodied in the MERS Plan Document (as revised). MERS was established to provide a pooled program for retirement, survivor and disability benefits on a voluntary basis to the State of Michigan's local government employees.

On August 15, 1996, pursuant to 1996 PA 220, MERS became independent from the State of Michigan. Prior to that time, MERS was a component unit of the State and operated within the Department of Management and Budget. Since 1996, MERS is solely administered by a nine-member Retirement Board. It consists of the following members, each of whom, except for the retiree member and the Retirement Board appointees, shall be from a different county at the time of election:

- Two members, appointed by the Retirement Board, who have knowledge or experience in retirement systems, administration of retirement systems, investment management or advisory services
- One member, a retiree of the System, is appointed by the Retirement Board
- Three members of the System, officers of a participating municipality or of a
- participating court, who are elected as officer Board members by the delegates at the MERS Annual Meeting
- Three employee members of the System, who are not officers of a participating municipality or of a participating court, who are elected as employee Board members by the delegates at the MERS Annual Meeting

The regular term of office for members of the Retirement Board is three years. Members of the Retirement Board serve without compensation with respect to their duties, but are reimbursed by the System for their actual and necessary expenses incurred in the performance of their duties.

The MERS Retirement Board establishes the benefit plans and provisions that are available for adoption. The local municipality's governing body adopts all benefits of the plan. The various plans are discussed in the Actuarial Section. Pursuant to Article 9, Section 24 of the Constitution of the State of Michigan: "The accrued financial benefits of each pension plan and retirement system of the state and its political subdivisions shall be a contractual obligation thereof which shall not be diminished or impaired thereby. Financial benefits arising on account of service rendered in each fiscal year shall be funded during that year and such funding shall not be used for financing unfunded accrued liabilities."

Employee contribution rates vary depending on the benefit plan adopted by the local government. If an employee leaves employment or dies before becoming eligible for retirement benefits, accumulated employee contributions (plus interest) are refunded to the employee or designated beneficiary upon application.

The MERS programs have been determined to be a governmental plan that is a tax-qualified trust under Internal Revenue Code (the Code) Section 401(a), and tax exempt under Section 501(a). The Internal Revenue Service issued the most recent Letter of Favorable Determination for MERS on April 26, 2012. This updated approval is part of the Internal Revenue Service's Cycle C program for governmental plan Letters of Favorable Determination. The benefits of tax-qualified status include the preferential deferred taxability of contributions, accumulated earnings, pensions, rollovers, annual compensation limits, and benefit limitations.

Under the Code, the major portion of a retiree's pension becomes taxable upon periodic distribution. Pursuant to IRC Section 72(d), any

"after tax contributions" are recovered tax-free over the life expectancy of the retiree (or beneficiary, if applicable).

The IRC Section 401(a) (17) limits the amount of compensation an active employee can receive for pension benefit calculation purposes and, correspondingly, limits the amount of employer and employee contributions. Compensation in excess of the 401(a) (17) limit (\$250,000 for 2012 and \$255,000 for 2013) will not be credited by MERS. Contributions in excess of the Internal Revenue Service limit will not be collected or accepted, nor figure into final average compensation for benefit purposes.

In addition, IRC Section 415 (b) (1) (A) imposes certain limitations on pension benefit payments from the MERS qualified trust. Any amounts that exceed the limitations shall be paid from a Qualified Excess Benefit Arrangement (QEBA), as authorized by IRC Section 415(m) and Michigan Compiled Law 38.1686. The QEBA shall be a separate plan, and is annually cash funded by the affected participating municipality or court. The Retirement Board established the MERS QEBA in 2003 solely for the purpose of providing retirees and beneficiaries, that portion of the retirement allowance exceeding the Section 415 limits, and otherwise not payable by the trust under the terms of the MERS qualified plan. The Internal Revenue Service approval of the QEBA was pursuant to Private Letter Ruling issued December 15, 2003. Retirees and beneficiaries do not have an election, directly or indirectly, to defer compensation to the QEBA.

The MERS Defined Contribution Plan became operative July 8, 1997, under Section 401(a) of the Internal Revenue Code. On this date, the MERS Plan Document of 1996 was first determined by the Internal Revenue Service Letter of Favorable Determination to meet qualifications as a "governmental plan" trust under Code Section 401(a), and tax exempt under Section 501(a). MERS has contracted with a third party administrator for recordkeeping and administrative functions. The plan is available to all MERS participating municipalities and may be adopted on a

division-by-division basis. Plan provisions and requirements are specified in the MERS Plan Document. MERS Defined Contribution Plan provides employees with an account they manage. At retirement, benefits are based solely on the amount contributed by the employee and employer, and the performance of investments. The plan has several strategic investment categories designed to help employees meet their retirement goals. All participants have access to MERS streamlined investment menu that allows for simple and strategic investing.

The MERS Hybrid Plan is an option for members that includes both a defined benefit and a defined contribution component.

The defined benefit component (Part I) is employer funded, with benefit multipliers of 1.0, 1.25, and 1.5%. The defined contribution component (Part II) is a combination of employer and employee contributions that are invested in mutual funds selected by the individual participant.

MERS received a Private Letter Ruling dated January 13, 2004 allowing the establishment of an Internal Revenue Code Section 115 Integral Governmental Trust, giving MERS the ability to create two programs – the Health Care Savings Program and the Retiree Health Funding Vehicle.

The MERS Health Care Savings Program became operational in June 2004 and was made available to all municipalities in Michigan. The employer-sponsored program provides medical reimbursement accounts to participating employees. Medical expenses are reimbursed, as defined in Code Section 213, once employees terminate employment, are on medical leave for six months or longer, or are on disability from any public pension plan. There are four types of contributions that may be used in the program: 1) Basic Employer (tax-favored), 2) Mandatory Salary Reductions (tax-favored), 3) Mandatory Leave Conversions (tax-favored), and 4) Voluntary Employee Contributions (post-tax).

As a result of the Private Letter Ruling, Code Section 213, reimbursements are tax-exempt for the employee, their spouse, and/or Code Section 152 dependent(s). The Health Care Savings Program accounts are invested in the MERS Investment Menu, and earnings are tax exempt as a result of the MERS Private Letter Ruling. Plan provisions and requirements are specified in the MERS Health Care Savings Program and Retiree Health Funding Vehicle Plan Document and Trust.

The MERS Retiree Health Funding Vehicle became operational in the fall of 2004 and was made available to all municipalities in Michigan. Participating municipalities can contribute monies to the Trust as desired and no contribution method in imposed. These funds constitute a health care fund, which enable municipalities to accumulate monies to provide or subsidize health benefits for retirees and beneficiaries as defined by Code Section 213. The Retiree Health Funding Vehicle accounts are invested in the MERS Core Investment Options and earnings are tax exempt as a result of the MERS Private Letter Ruling. Plan provisions and requirements are specified in the MERS Health Care Savings Program and Retiree Health Funding Vehicle Plan Document and Trust.

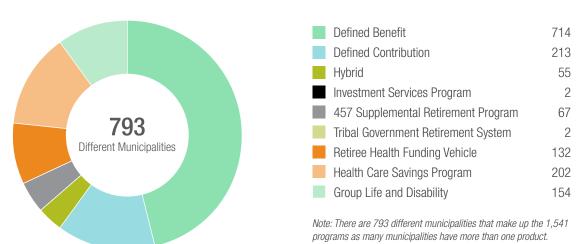
The MERS 457 Program was established as a deferred compensation plan and trust and became operational November 8, 2011. Its purpose is to provide benefits under the Plan to participants and beneficiaries upon retirement, termination, disability, or death, upon the terms and conditions, and subject to the limitations contained in the Plan. The Plan was created for the exclusive benefit of eligible participants and their beneficiaries of any employer electing to participate in the Plan. The Plan is intended to qualify under Code Section 457(b) and the Plan is intended to be tax-exempt under Code Section 501(a). All assets held in connection with the Plan, including all contributions and amounts of compensation deferred pursuant to the Plan, all property and rights acquired

or purchased with such amounts and all income attributable to such amounts, property or rights shall be held in trust for the exclusive benefit of participants and their beneficiaries under the Plan. No part of the assets and income of the Plan shall be used for, or diverted to, purposes other than for the exclusive benefit of participants and their beneficiaries and for defraying reasonable expenses of the Plan.

The Investment Services Program is an investment trust fund that is available to all municipalities in Michigan to invest funds through the MERS portfolio while maintaining administrative functions at the municipal level. The program was established by the MERS Board in March 2006 and began operations in June 2006.

The Investment Services Program trust fund complies with all the requirements imposed by the Public Employee Retirement System Investment Act, 1965 Public Act 314. Participation in the Investment Services Program does not qualify as membership in MERS pension plans, and the participating employer does not have a vote at the MERS Annual Meeting.

# MERS Participating Municipalities as of December 31, 2012



Any "municipality" (a term defined by Section 2b (2) of the Retirement Act, Michigan Compiled Law 38.1502b (2)) within the state may elect to become a participating member of MERS by a majority vote of the municipality's governing body, or by an affirmative vote of the qualified electors. Changes in retirement plan coverage are available to bargaining units after approval by a majority vote of the municipality's governing body.

# MERS Membership as of December 31, 2012

	Defined Benefit	Defined Contribution	Hybrid	Health Care Savings Program	457
Active	33,969	7,885	518	6,423	404
Deferred	7,738	NA	20	NA	NA
Retired	32,348	NA	8	NA	NA
Contributions not Vested	8,276	NA	375	NA	<u>NA</u>
Terminated	NA	2,325	NA	1,627	33
Product Totals	82,331	10,210	921	8,050	437

Total MERS Employment*	101,949
Total MERS Membership**	94,262

<sup>\*</sup> Total Employment represents the total number of accounts within MERS, individuals may be represented multiple times across categories

<sup>\*\*</sup> Total membership represents the number of unique individuals that have a liability in a program. At least one of the individual's employments fell into the following categories: Active Status, Retired Status, Terminated Status DB vested, Terminated Status DB not vested but has a contribution balance, Terminated Status Hybrid vested, Terminated Status Hybrid not vested but has a contribution balance, Terminated Status DC with a contribution balance, or Terminated Status HCSP with a contribution balance.

# 2. Summary of Significant Accounting Policies

# **Reporting Entity**

The Retirement Board is responsible for the administration of the Retirement System, has fiduciary responsibility for the investment of assets, and oversees all funds included in these financial statements. The Retirement Board appoints the Chief Executive Officer who manages and administers the System under the supervision and direction of the Board.

MERS is an independent non-profit public corporation. MERS financial statements are not included in the financial statements of any other organization; it is the only entity included in this financial report.

#### **Cost Allocation**

The costs of administering the MERS Defined Benefit Plan are allocated to the municipalities along with investment gains and losses on a quarterly basis. The funding and accounting for each municipality is separate. The liabilities of each member municipality remain with that municipality, and the assets of one municipality cannot be used to pay the liabilities of another municipality. Additionally, the assets are combined for investment and administrative purposes, but maintained separately for accounting purposes.

The costs of administering the MERS Defined Contribution Plan, Health Care Savings Program, Retiree Health Funding Vehicle, and Investment Services Program are allocated out to the municipalities and members based on an administrative expense percentage for each municipality and member.

# **Basis of Accounting**

The financial statements for MERS are prepared on the accrual basis in accordance with Generally Accepted Accounting Principles (GAAP) as applicable to government organizations. The preparation of financial

statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period.

MERS Defined Benefit Plan employer and employee contributions are recognized when due pursuant to formal commitments, as well as statutory or contractual requirements. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan. Expenses and the associated liabilities for those expenses are also recorded using the accrual method when the liability is incurred.

The Defined Contribution Plan, 457 Program, Health Care Savings Program, Retiree Health Funding Vehicle and Investment Services Program financial statements are prepared using the modified accrual accounting method (which approximates the accrual basis of accounting) primarily for revenues which are recorded when funds are received and deposited. Expenses and the associated liabilities for those expenses are also recorded using the accrual method when the liability is incurred.

Plan investments are presented at fair value using the accrual method for those investments which are invested in the MERS portfolio. Investment purchases and sales and the associated investment payables and investment receivables, are recorded on their trade date. Investments invested outside of the MERS portfolio, (primarily mutual funds) are recorded at fair value.

#### **GASB 27**

The Governmental Accounting Standards Board (GASB) Statement No. 27, "Accounting for Pensions by State and Local Governmental Employers," requires certain changes in reporting pensions by employers. The following section is required and pertains to MERS staff only:

Prior to separation from the State of Michigan on August 15, 1996, the pension liability for MERS staff remained the obligation of its official employer, the State of Michigan. Therefore, MERS has no pension liability for staff prior to August 15, 1996, when it began independent payroll processing separate and apart from the State of Michigan.

After separation from the State in 1996, the MERS Retirement Board (as an employer) elected to become a participating municipality in the MERS Defined Benefit Plan, and to provide pension benefits for MERS staff.

Vesting occurs after six years of credited service; normal retirement age is 60, although an employee may retire at age 55 with 30 years of credited service. The annual pension benefit is calculated by multiplying the employee's years of credited service by 2.25%, and then multiplying by the final average compensation based on the highest consecutive three years of compensation.

In 2012, MERS contributed 11.33% of compensation; employees contributed 2% of compensation.

The following pension information for GASB 27 applies to MERS staff only:

#### Schedule of Funding Progress

Actuarial Valuation December 31	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded (Over) AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)/c)
2009	\$9,202,748	\$9,954,321	\$751,573	92.45%	\$8,198,952	9.17%
2010	11,347,345	11,893,235	545,890	95.41	9,113,922	5.99
2011	13,500,888	14,947,095	1,446,207	90.32	10,195,504	14.18

#### **GASB 63**

The Governmental Accounting Standards Board (GASB) Statement No. 63, "Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources, and Net Position," provides financial reporting guidance for deferred outflows and inflows of resources. It also amends the net asset reporting requirements of GASB Statement No. 34 and other pronouncement by incorporating deferred outflows and inflows of resources into the definitions of the required components of the residual measure and by renaming that measure as net position, rather than net assets. The requirements of this statement were effective for the periods beginning after December 15, 2011. MERS has implemented GASB Statement No. 63 for the fiscal year ended December 31, 2012.

Actuarial Accrued Liability from December 31, 2011 and December 31, 2010 Actuarial Valuations
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	2011	2010
Active Members	\$12,326,833	\$9,930,102
Retirees and beneficiaries currently receiving benefits	2,218,957	1,558,188
Vested former members not yet receiving benefits	331,206	341,525
Nonvested terminated employees (pending refunds of		
accumulated member contributions)	70,099	63,420
Total Actuarial Accrued Liability	14,947,095	11,893,235
Net assets available for benefits at actuarial value (\$11,196,484 and \$9,757,623 at market value for December 31, 2011, and 2010, respectively)	13,500,888	11,347,345
		, ,
Unfunded actuarial accrued liability	\$1,446,207	\$545,890 

#### Three-Year Trend Information Schedule of Employer Contributions

Fiscal Year Ended	Annual Pension Cost (APC)	Percentage of APC Contributed	Net Pension Obligation
December 31, 2010	\$994,080	100%	-
December 31, 2011	920,736	100	-
December 31, 2012	1,005,264	100	-

# **Post-Employment Benefits**

The Government Accounting Standards Board (GASB) Statement No. 50, Pension Disclosures – an amendment of GASB Statements No. 25 and No. 27 – more closely aligns the financial reporting requirements for pensions with other post-employment benefits. This enhances information disclosed in the "Notes to Basic Financial Statements," or presented as required supplementary information by pension plans and employers.

The MERS Retiree Health Funding Vehicle is designed to be an investment choice for municipalities rather than a plan for other post-employment benefits. The other post-employment benefit plan remains with the municipalities for their administration, and implementation of GASB Statement 50 will reside with them.

#### Fair Value of Investments

In accordance with GASB 25, plan investments are presented at fair value. Short-term investments are valued at cost plus accrued interest, which approximates fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Corporate bonds not traded on a national or international exchange are based upon equivalent values of comparable securities with similar yield and risk. Independent appraisals are the basis for valuing the fair value of real estate. Other investments that do not have established markets are recorded at an estimated fair value. Real estate investments typically have a quarter lag in reporting, which is an industry standard.

### **Capital Assets**

Office furniture, equipment, and software with a value of \$5,000 or more are carried at cost, less accumulated depreciation. The capital assets are depreciated using the straight-line method over the estimated useful lives of the related assets varying from three- to eight-year spans. The table below is a schedule of the capital asset account balances as of December 31, 2011, and December 31, 2012.

Capital Assets	Office Furniture and Equipment	Software	Total Capital Assets
Balances December 31, 2011	\$3,528,584	\$19,742,401	\$23,270,985
Additions	259,748	2,996,400	3,256,148
Deletions and Transfers	(646,128)	(4,038,669)	(4,684,797)
Balances December 31, 2012	\$3,142,204	\$18,700,132	\$21,842,336
Accumulated Depreciation			
Balances December 31, 2011	\$2,160,319	\$13,810,159	\$15,970,478
Depreciation Expense	539,029	1,509,192	2,048,221
Deletions and Transfers	(646,128)	(4,038,669)	(4,684,797)
Balances December 31, 2012	\$2,053,220	\$11,280,682	\$13,333,902
Net Capital Assets December 31, 2012	\$1,088,984	\$7,419,450	\$8,508,434

MERS occupies two buildings in Delta Township (west of Lansing) that it leases at fair market value rental rates from properties that are maintained in the MERS investment portfolio. These properties are actively managed by MERS Office of Investments staff. In 2012, MERS paid \$687,600 in rent for the two buildings. At December 31, 2012, the two properties occupied by MERS staff had a value of \$8.6 million.

#### **Total Columns on Statements**

The "Total" columns on the "Statement of Plan Net Position" and "Statement of Changes in Plan Net Position" are presented to facilitate financial analysis. Amounts in these columns do not present the plan net position and changes in plan net position in conformity with GAAP, nor is such data comparable to a consolidation. Transactions between the Defined Benefit Plan, Defined Contribution Plan, Health Care Savings

Program, 457 Supplemental Retirement Program, Retiree Health Funding Vehicle, and Investment Services Program have not been eliminated from the "Total" columns.

Certain prior year amounts have been reclassified to conform with the current year presentation.

# 3. Contributions and Reserves

#### Contributions

The Defined Benefit Plan contribution funding requirements are actuarially determined using the entry age normal actuarial cost method, and are based upon the benefit plan adopted by the municipality. Some municipalities fund their entire pension obligations solely from employer contributions. Most municipalities jointly fund pension obligations from employee and employer contributions. Monthly employee contributions are based upon a percentage of actual compensation as determined by the employer. Employer contributions are based upon projected compensation as determined by an annual actuarial valuation. Employee contributions are held in individual member accounts that are credited with interest annually. Pursuant to Board resolution adopted November 9, 2005, the interest rate for each year beginning in 2005 is the one-year T-bill rate as of December 31 each year for the ensuing December 31 employee interest calculation. It is also used for interest calculations the subsequent year for those employees requesting a refund of their contributions.

Contributions to the Defined Contribution Plan are reported directly to MERS by the participating municipalities, and are separate from contributions made to the MERS Defined Benefit Plan. Both employer contributions and employee voluntary and mandatory contributions are governed by the contribution limits under the Internal Revenue Code. Municipalities may elect to have mandatory employee contributions where the member pays a fixed dollar or percentage. If the municipality has a match contribution type, the member will elect the amount of contribution at the time of enrollment, and will not be allowed to make any changes. Municipalities may also choose to allow additional after-tax contributions through payroll deduction.

Participating municipalities may, upon adoption of a Defined Contribution resolution for new hires, offer current Defined Benefit employees an opportunity to opt into Defined Contribution. MERS transfers the actuarial present value of the employee's accrued benefit in the Defined Benefit Plan into the employee's Defined Contribution account (at a stipulated funded ratio that shall not exceed 100%). Employees direct their contributions to various investment options offered by the MERS Office of Investments, and may transfer their account balances between investment categories or make changes to the percentage allocation on a daily basis.

#### **Defined Benefit Plan Reserves**

Three reserves have been established pursuant to the MERS Plan Document. See "Schedule of Changes in Reserves" in the Statistical Section.

#### Reserve for Employee Contributions

All additions to and deductions from this reserve are for the Defined Benefit Plan and Defined Benefit portion of the Hybrid Plan. Employee contributions and interest are credited to this reserve. Also credited are monies received from the purchase of service credit and monies received in repayment of previously refunded contributions. The reserve is reduced by amounts paid to employees who terminate employment and request refunds, and by amounts transferred into the "Reserve for Employer Contributions and Benefit Payments" upon an employee's retirement. Interest is credited to each employee's account, as provided in the Board's November 9, 2005 Resolution.

#### • Reserve for Employer Contributions and Benefit Payments

All additions to and deductions from this reserve are for the Defined Benefit Plan and Defined Benefit portion of the Hybrid Plan. All employer contributions are credited to this reserve. Net income is allocated to this reserve from the "Reserve for Expenses and Undistributed Investment Income." At retirement, the employee's accumulated contributions (if any and including interest) are transferred into this reserve from the "Reserve for Employee Contributions." Monthly benefits paid to retirees reduce this reserve.

#### Reserve for Expenses and Undistributed Investment Income

All additions to and deductions from this reserve are for the Defined Benefit Plan and Defined Benefit portion of the Hybrid Plan. All investment earnings and other monies received that are not dedicated to other areas are credited to this reserve. All administrative and investment expenses are paid from this reserve. Transfers from this reserve to the "Reserve for Employer Contributions and Benefit Payments" are at allocation rates determined by the Retirement Board.

#### Other Reserves

Each of the products outside of Defined Benefit Plan has its own reserve for additions and deductions to be recorded. MERS maintains separate employer account records for each municipality within the product.

A more detailed analysis of the reserves can be found in the Statistical Section.

# 4. Deposits and Investments

The Retirement Board has the fiduciary responsibility and authority to oversee the investment portfolio. Various professional investment managers are contracted to manage the System's assets. All investment decisions are subject to statutory regulations imposed under the Michigan Public Employee Retirement System Investment Act, 1965 PA 314, as amended, and the investment policy guidelines established by the Retirement Board. Michigan law allows diverse investment in stocks, corporate and government bonds, mortgages, real estate, and other investments. The Act sets forth prudent standards and requires the assets of the Retirement System be invested solely in the interest of the participants and beneficiaries. Under Plan Document Section 55(6), and 1965 PA 314, and Section 401(a)(2) of the Internal Revenue Code, the investments shall be made for the exclusive purpose of providing benefits to the participants and their beneficiaries, and defraying reasonable expenses to the System.

The Retirement Board's investment policy requires independent performance measurement of investment managers, and establishes total return objectives for the total portfolio and major categories of investments. As of December 31, 2012, all securities held met the required statutory provisions and Retirement Board policy. As of the same dates, no investments were in default or subject to bankruptcy proceedings that had not been previously recorded.

## Cash Deposits

Custodial credit risk for cash deposits is the risk that, in the event of a failure of a depository financial institution, the system may not be able to recover it deposits. Balances on deposit are insured by the Federal Deposit Insurance Corporation (FDIC) up to specified limits. Balances in excess of FDIC limits are uninsured. MERS has not experienced any losses in its accounts and believes it is not exposed to a significant credit risk on its cash.

#### Credit Risk

Credit risk is the financial risk that an issuer or other counterparty will not fulfill its obligations to MERS. Credit risk exposure is dictated by each investment manager's agreement. Other criteria based on MERS Retirement Board's investment policy, includes that if a security is downgraded below investment grade after purchase, a review with a written explanation shall be forwarded to the Investments staff. Board policy also allows that when calculating the average rating of the portfolio, the manager may use the highest rating of the major rating agencies to calculate the average. Board policy, with regard to global fixed income securities, is that no more than 10% of the portfolio may be invested in corporate bonds or sovereign bonds rated below investment grade, as defined by Moody's and Standard & Poor's. Board policy for global fixed income securities is that the average weighted credit of the portfolio will be a minimum of A-. When calculating the average rating of the global portfolio, the manager may use the highest rating of the major agencies to calculate the average. Board policy with regard to global, non-investment grade fixed income

securities includes criteria that credit quality must maintain a minimum of 10% of the portfolio in investment grade fixed income with at least two ratings of BBB-/Baa3 or higher (as assigned by Standard & Poor's or Moody's). Each portfolio is managed in accordance with investment guidelines that are specific as to permissible credit quality ranges, exposure levels within individual security quality rating tiers, and/or the average credit quality of the overall portfolio.

As of December 31, 2012, the domestic fixed income portfolio consisted of fixed income investments with respective quality ratings, excluding those obligations of the U.S. government. Investments issued by or explicitly guaranteed by the U.S. government are not considered to have credit risk. The Plan's exposure to credit risk as of December 31, 2012, is presented on the following pages, by investment category as rated by Standard & Poor's, Moody's, and Fitch credit ratings.

# Credit Ratings Summary - December 31, 2012

Quality Rating	Agencies	Asset Backed	Corporate Bonds	Foreign	LMTD Part Units
AAA/Aaa	\$62,841,734	\$3,670,444	\$16,149,954	\$0	\$0
AA+/Aa1	63,900,916	81,938	33,322,724	411,959	0
AA/Aa2	5,473,160	2,481	17,363,369	0	0
AA-/Aa3	30,510,675	162,759	26,779,003	2,402,014	0
A+/A1	3,824,613	375,759	36,948,335	0	0
A/A2	18,077,629	1,030,730	86,932,848	3,502,937	0
A-/A3	40,960,888	0	116,917,963	7,443,741	0
BBB+/Baa1	16,287,641	643,330	89,052,461	11,484,630	0
BBB/Baa2	44,653,284	580,902	110,964,034	13,195,086	0
BBB-/Baa3	14,644,252	0	97,900,312	19,065,987	0
BB+/Ba1	5,437,789	0	58,834,650	9,970,860	0
BB/Ba2	12,924,003	180,759	32,929,857	11,434,588	0
BB-/Ba3	1,308,750	0	37,847,683	11,947,518	0
<u>B</u> +/B1	3,879,708	0	50,204,177	20,442,140	0
B/B2	993,755	0	28,557,986	7,443,741	0
B-/B3	903,232	0	23,657,757	3,915,080	0
CCC+/Caa1	0	0	8,673,261	0	0
CCC/Caa2	0	913,532	0	0	0
CCC-/Caa3	0	0	2,253,001	0	0
CC/Ca	0	288,491	775,258	0	0
C	0	0	0	0	0
D/C	0	928,134	530,000	0	0
NA	0	0	0	0	0
Cash with no ratings	0	0	982,642	713,098	0
NR*	1,671,976	567,782	30,715,865	5,138,676	335,554,308
Totals	\$328,294,005	\$9,427,041	\$908,293,141	\$128,512,057	\$335,554,308

<sup>\*</sup>The Not Rated classification includes \$336 million in limited partnerships without credit ratings. Removing that classification leaves the overall portfolio at 2% Not Rated.

# **Reconciliation of Investments**

Fixed income	\$2,307,555,447
Total from page 39	2,274,647,243
Difference from Investments	32,908,204
Payables settling in 2013 Receivables settling in 2013 Foreign Exchanges settling in 2013	(213,735,148) 245,699,072 944,281
Small difference	(1)
Total	\$32,908,204

Mortgage Backed Securities	Other	Short-Term Cash	U.S. Treasuries	Total	% of Portfolio
\$22,188,814	\$0	\$0	\$331,684,809	\$436,535,755	19.19%
25,110,982	0	0	3,156,183	125,984,702	5.54
91,855,003	2,693,273	0	0	117,387,286	5.16
264,566	0	0	0	60,119,017	2.64
81,988	0	0	0	41,230,695	1.81
800,824	0	0	0	110,344,968	4.85
822,151	37,328	0	0	166,182,071	7.31
963,776	21,351	0	0	118,453,189	5.21
102,932	15,024	0	0	169,511,262	7.45
0	333,971	0	0	131,944,522	5.80
0	41,119	0	0	74,284,418	3.27
0	25,856	0	0	57,495,063	2.53
131,495	136,822	0	0	51,372,268	2.26
96,642	467,220	0	0	75,089,887	3.30
0	413,619	0	0	37,409,101	1.64
139,127	23,693	0	0	28,638,889	1.26
0	694,534	0	0	9,367,795	0.41
2,237,053	0	0	0	3,150,585	0.14
0	0	0	0	2,253,001	0.10
867,568	972,354	0	0	2,903,671	0.13
0	0	0	0	0	0.00
693,278	0	0	0	2,151,412	0.09
0	0	0	0	0	0.00
0	0	74,490,686	0	76,186,426	3.35
3,351,714	-349,065	0	0	376,651,256	16.56
\$149,707,913	\$5,527,099	\$74,490,686	\$334,840,992	\$ 2,274,647,243	100%

#### Interest Rate Risk

Interest rate risk is the risk that an investment's value will change due to a change in the absolute level of interest rates. Interest rate risk is controlled through diversification of portfolio management styles. Duration is a measure of interest rate risk. The greater the duration of a bond or a portfolio of bonds, the greater its price volatility will be in response to a change in interest rates and vice-versa. Sensitivity to changing interest rates may derive from prepayment options embedded in an investment. The Board policy, in regard to interest rate risk, is that the effective duration of the domestic portfolio shall be (+/-) 20% of the Barclays Capital Aggregate Index or the

Barclays Universal Bond Index. Board policy in regard to global non-investment grade fixed income securities is that the portfolio's duration is (+/-) 2 years of the benchmark duration. The benchmark for global non-investment grade fixed income securities is 1/3 Barclays Capital U.S. Treasury Inflation Protected Securities Index, 1/3 Citigroup High Yield Market Index, and 1/3 JP Morgan Emerging Markets Global Bond Index. As of December 31, 2012, the Plan's exposure to interest rate risk (as measured by the effective duration method summary) is listed on the following page by investment type.

Effective Duration – December 31, 2012

Investment Type	Market Value	Weighted Effective Duration
Agency	\$47,264,200	6.09
Asset Backed	13,431,321	2.96
Cash Equivalent	2,053,604	6.28
CMBS	16,870,577	2.53
CMO	12,971,732	8.13
Convertible	177,157	8.35
Corporate	795,503,290	4.99
Euro	14,577,241	4.46
Foreign	250,785,138	6.62
Loans	2,721,457	2.76
Mortgage Pass-Through	108,757,567	1.59
Preferred Stock	2,660,319	9.44
Private Placement	1,955,440	7.41
Quasi Sovereign	52,675,747	6.06
Sovereign	72,429,152	6.06
Swaps	-860,326	4.09
Unclassified	679,205	<u> </u>
US Treasury	343,145,411	4.04
Yankee (International bonds in U.S. dollars)	99,819,735	7.32
	\$1,837,617,967	

#### Concentration of Credit Risk Debt Securities

Concentration of credit risk is the risk of loss attributed to the magnitude of an entity's exposure in a single issuer. The investment policy states securities representing debt and equity of any one company shall not exceed 5% of the fair value of the Plan's portfolio. MERS did not hold a single organization's securities that exceeded 5% of the Plan's investment portfolio other than those issued or explicitly guaranteed by the U.S. government as of December 31, 2012.

# Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment. MERS currency risk exposure, or exchange rate risk, is primarily derived from its holdings in foreign currency denominated equities, and fixed income investments. MERS Retirement Board investment policy for the global non-investment grade fixed income portfolio, allows currency hedging to mitigate currency exposure.

Hedging the non-U.S. dollar currency exposure of the portfolio is permitted. The portfolio will be limited to the maximum net currency exposure of 25% at any given time.

MERS exposure to foreign currency risk in U.S. dollars as of December 31, 2012, is summarized on the following page.

#### **Custodial Credit Risk**

Custodial credit risk is the risk that deposits may not be recovered in the event of failure of a depository financial institution. As of December 31, 2012, the \$523.8 million carrying amount of the Plan's cash and cash equivalents was comprised of \$509.6 million of short-term investments, and \$14.2 million in deposits. The \$14.2 million bank balance of deposits was subject to custodial credit risk because it was uninsured and uncollateralized.

Foreign Currency Risk in U.S. Dollar Denominations – December 31, 2012

0	E 11	Fixed	
Currency	Equities	Income	Total
Argentine peso	\$2,118,747		\$2,118,747
Australian dollar	16,857,622	\$32,567,044	49,424,666
Bahraini dinar	366,826		366,826
Bangladesh taka	2,170,930		2,170,930
Bermudian dollar	170,911		170,911
Brazilian real	26,750,628	10,180,318	36,930,946
Botswana pula	568,431		568,431
British pound sterling	54,784,669	4,442,617	59,227,286
Bulgarian lev	73,101		73,101
Canadian dollar	22,975,489	19,579,080	42,554,569
Chilean peso	70,096		70,096
Chinese renminbi	23,090,023		23,090,023
Colombian peso		2,409,650	2,409,650
Croatian kuna	1,989,703	2, .30,000	1,989,703
Danish krone	6,975,665		6,975,665
Euro	62,402,133	58,878,875	121,281,008
Ghanaian cedi	21,810	30,070,073	21,810
Hong Kong dollar	27,909,210		27,909,210
Hungarian forint	21,303,210	6,732,911	6,732,911
Indonesian rupiah	120 111	729.809	
	132,111	1 29,809	861,920
Israeli new shekel	3,324,728	10.050.004	3,324,728
Japanese yen	63,022,784	10,959,864	73,982,648
Jordanian dinar	884,256		884,256
Kenyan shilling	3,048,258		3,048,258
Kuwaiti dinar	10,925,897	(m.og.:	10,925,897
Malaysian ringgit	957,063	17,658,839	18,615,902
Mauritian rupee	899,794		899,794
Mexican peso	3,262,648	15,572,715	18,835,363
New Zealand dollar	93,539	16,334,848	16,428,387
Nigerian naira	12,410,252		12,410,252
Norwegian krone	6,625,742	10,314,039	16,939,781
Omani rial	3,121,987		3,121,987
Paklstani rupee	3,791,070		3,791,070
Philippine peso	60,375		60,375
Polish zloty	186,166	17,631,936	17,818,102
Qatari riyal	10,626,325		10,626,325
Romanian leu	1,256,179	561,632	1,817,811
Russian ruble	14,202,844	346,620	14,549,464
Singapore dollar	9,208,773		9,208,773
Sri Lankan rupee	1,748,063		1,748,063
South African rand	100.114	12,516,753	12,616,867
South Korean won	27,770,103	16,959,423	44,729,526
Swedish krona	2,423,927	9,621,639	12,045,566
Swiss franc	4,558,128	5,521,000	4,558,128
Taiwan dollar	4,550,598		4,550,598
Thai baht	2,963,511	10,045,903	13,009,414
Turkish lira	844,153	10,040,800	844,153
Tunisian dollar	· · · · · · · · · · · · · · · · · · ·		
	679,955		679,955
United Arab Emirates dirham	7,793,579		7,793,579
Vietnamese dong	2,162,291		2,162,291
Total International	\$452,021,207	\$274.044.515	\$726 07F 722
Investment Securities	\$452,931,207	\$274,044,515	\$726,975,722

# **Securities Lending**

MERS' policy authorizes participation in a securities lending program administered by its global custodian, State Street Bank and Trust Company. MERS receives income as the owner of securities, as well as income from the lending of those securities. There are no dividends or coupon payments owing on the securities on loan. Securities lending earnings are credited to MERS and other participating clients on approximately the 15th day of the following month. The securities loans are open contracts and, therefore, could be terminated at any time by either party.

The borrower collateralizes the loan with either cash or securities at 102% of market value plus accrued interest on domestic securities, and 105% of market value plus accrued interest on international securities loaned. Due to the nature of the program's collateralization of U.S. fixed income securities loans at 102% plus accrued interest, MERS management believes that there is no credit risk per GASB 40 since the lender owes the borrower more than the borrower owes the lender. Cash collateral is invested for MERS in a dedicated short-term

investment fund consisting of investment grade fixed income securities. The custodian provides for full indemnification to MERS for any losses that might occur in the event of borrower default resulting from negligence or intentional misconduct. Securities on loan are marked to market daily to ensure the adequacy of the collateral. There are no restrictions on the amount of securities that can be loaned at one time. Neither MERS nor the custodian has the ability to pledge or sell collateral securities delivered unless the borrower is in default.

MERS has never experienced a loss on securities lending transactions resulting from the default of a borrower or lending agent since it commenced lending securities in March 1995. As of December 31, 2012, the fair market value of fixed income securities invested in the cash collateral pool was below the original cost, resulting in a cumulative unrealized loss of \$2 million that is reflected in the financial statements. Security lending produced a net income of \$3.8 million in 2012, excluding unrealized gains and losses.

Collateral Held and Fair Value of Securities on Loan - December 31, 2012

Fair Value of Securities on Loan	Nature of Collateral	Collateral Held
\$605,499,819	Cash Non-Cash	\$620,739,058
\$605,499,819		\$620,739,058

#### Securities Lending Collateral

	S & P Rating	Percentage	Amount
Short-Term	A-1+/P-1 *	18.09%	\$112,268,418
Credit Ratings	<u>A-1/P-1</u> *	59.82	371,349,382
Long-Term	AAA	1.38	8,577,683
Credit Ratings	AA	11.08	68,764,231
	A	5.96	37,016,532
	BBB+	0.00	0
	BBB	0.52	3,258,259
	BBB-	0.00	0
	BB+	0.00	0
	BB	0.00	0
	BB-	0.00	0
	Other	3.15	19,504,553
		100.00%	\$620,739,058
Net accumulated deprecia	tion in fair value		(1,983,356)
Invested Securities Lending	g Collateral		\$618,755,702

<sup>\*</sup>A short term obligation rated A-1/P-1 is rated in the highest category by both Standard & Poor's (S&P) and Moody's Investor Services. These Issuer's have a superior ability to repay short-term obligations. S&P will designate certain issues with a plus sign (+) to indicate that the obligor's capacity to meet its financial committument is extremely strong.

# **Derivatives**

Derivative instruments are financial contracts whose value depends on the values of underlying assets, reference rates, or financial indexes. They include futures contracts, swap contracts, credit-linked notes (CLN) and forward foreign currency exchange. While the Board has no formal policy specific to derivatives, MERS holds investments in futures contracts, swap contracts, credit linked notes, and forward foreign currency exchange. MERS enters into these derivative contracts primarily to obtain exposure to different markets to enhance the performance, and reduce the volatility of the portfolio. It enters swaps and futures contracts to gain or hedge exposure to

certain markets, and to manage interest rate risk and forward foreign exchange contracts primarily to hedge foreign currency exposure.

The following tables summarize the various contracts in the portfolio as of December 31, 2012. The notional value associated with these derivative instruments are generally not recorded on the financial statements; however, the amounts for the exposure (unrealized gains/losses) on these instruments are recorded. Interest rate risks associated with these investments are included in the table. MERS does not anticipate additional significant market risk from the swap arrangements.

#### Swap Contracts and Structured Notes - December 31, 2012

Name	Maturity Date	Position	Cost	Market Value	Counterparty
Dow Jones UBS Commodity Index	5/31/13	Long	\$335.548.948	\$327.192.563	Cargill Risk Management
CDX North American High Yield	6/20/17	Short	-	(177,989)	Bank of America
CMBX AAA	2/17/51	Short	(1,150,216)	(290,557)	Citigroup
CMBX North America Index	2/17/51	Short	(80,324)	(70,011)	Citigroup
Interest Rate Swap (USD)	12/9/19	Receive Floating	-	(321,770)	Citigroup
CLN Cablevision	2/13/18	Long	289,875	203,000	Deutchse Bank
CLN Brazil Inflation Linked	5/15/15	Long	1,205,962	1,195,894	JP Morgan
CLN Colombia	7/27/20	Long	635,468	740,829	Citigroup
CLN Colombia	7/24/24	Long	155,270	184,026	Citigroup
CLN Indonesia	5/15/18	Long	705,824	701,946	JP Morgan
CLN Russia	4/14/21	Long	338,896	364,001	Credit Suisse

Swap contracts are governed by International Swaps and Derivatives Association Master Agreements, MERS and counterparties. These agreements require collateral to be posted by either party when exposure exceeds the amount specified in the agreement (usually \$250,000 to \$5,000,000).

#### Foreign Currency Forward Contracts

Pending Receivable \$10,365,730 Pending Payable (10,331,271)

Foreign Currency Forward Contract Asset (Liability) \$34,459

#### Futures and Options Contracts - December 31, 2012

Futures Contract	Expiration Date	Long/Short	Cost	Market Value
US 2-Yr Treasury Note	3/28/13	Long	\$14,773,494	\$14,771,406
US 5-Yr Treasury Note	3/28/13	Long	127,026,755	127,026,758
US 10-Yr Treasury Note	3/19/13	Long	40,876,360	40,763,844
US Long Treasury Bond	3/19/13	Long	53,289,468	52,657,500
S&500 E-Mini Futures	3/14/13	Long	76,254,214	76,685,400
MSCI Emerging Market Futures	3/14/13	Long	32,832,805	33,868,925
US Dollar Put / Japanese Yen Call Option	2/24/14	Long	217,000	13,837

MERS could be exposed to risk if the counterparties to the contracts are unable to meet the terms of the contracts. MERS and its investment managers seek to control this risk through counterparty credit evaluations and approvals, counterparty credit limits, and exposure monitoring procedures. MERS anticipates that counterparties will be able to satisfy their obligations under the contracts. Investments in limited partnerships and combined funds may include derivatives that are not shown in the derivatives' totals

# Private Equity and Capital Calls

The MERS Board has approved \$833,204,546 for investment in private equity securities. As of December 31, 2012, \$777,713,801 was invested

in private equity with \$84,671,486 recallable return of capital, leaving \$140,162,231 available for future investments.

# 5. Commitments and Contingencies

MERS maintains insurance for workers' compensation, owned and leased vehicles, blanket property, fiduciary, fidelity, and faithful performance to cover other risk of loss such as personal injury to employees or others, property damage, or other liability.

In the normal course of business, MERS is involved in a number of disputes over benefits or other claims. MERS does not anticipate any material loss as a result of these claims. Furthermore, the cost of a successful benefit claim is ultimately the responsibility of the affected municipality – it becomes a funding obligation.

In 1998, MERS entered into a contractual agreement with a municipality and its bargaining units to pay for certain costs to settle a legal dispute. MERS recently determined the estimated present value of its liability under this agreement using actuarial principles. As a result of this analysis, MERS paid \$4.0 million to the municipality's MERS retirement account on December 31, 2012 to fulfill its outstanding obligation.

# 6. Related Parties

Tegrit Group is a collection of companies that provide public and private sector sponsors with solutions to retirement planning needs including actuarial consulting, retirement plan services, and technology. MERS is the majority stockholder of Tegrit Group. This is an investment in the MERS Strategic Opportunity Fund held within the MERS Total Market Fund. Tegrit Administrators, a division of the Tegrit Group, is the record-keeper for the MERS Defined Contribution Plan, Defined Contribution portion of the Hybrid Plan, Retiree Health Funding Vehicle, Investment Services Program, 457 Program, and the Health Care Savings Program. MERS contracts with Tegrit Technology for building and maintaining its pension software. MERS paid Tegrit Group \$4,952,518 in 2012 for these services.

Cobalt Community Research is a 501(c)(3) nonprofit, non-partisan coalition that helps local governments, schools and membership organizations measure, benchmark, and manage their efforts through shared data, high-quality affordable surveys, focus groups and meetings that use instant audience feedback technology. MERS facilitated the creation of Cobalt and MERS employees perform the regular work required to run Cobalt. Cobalt maintains separate financial reporting and is responsible for repaying MERS for all administrative costs including staff time. In 2012 Cobalt paid MERS \$102,461 to cover the year's expenses.

# 7. Funded Status and Funding Progress

The MERS funded status is summarized on pages 19-21 in the Management's Discussion and Analysis. The following funded status of the MERS Defined Benefit Plan is computed by aggregating all individual assets and liabilities:

Schedule of Funding Progress – (Dollars in Millions)

Actuarial	Actuarial	Actuarial	Unfunded	Funded	Covered	UAAL as a %
Valuation	Value of	Accrued Liability	(Over) AAL	Ratio	Payroll	of Covered
December 31	Assets (a)	(AAL) (b)	(UAAL) (b-a)	(a/b)	(c)	Payroll ((b-a)/c)
2011	\$7,150.5	\$9,844.4	\$2,693.9	72.6%	\$1,669.7	161.3%

The "Schedule of Funding Progress" that follows the "Notes to Basic Financial Statements" found on page 48 presents multi-year trend information about whether the actuarial value of plan assets is increasing or decreasing relative to actuarial accrued liability.

Actuarial valuations are prepared annually as of December 31 for each participating municipality. To facilitate budgetary planning needs, employer contribution requirements are provided for each municipality's unique fiscal year that commences after the following calendar year end. For example, the contribution requirements for fiscal years that began in 2012 were determined by actuarial valuations as of December 31, 2010.

Approximately 78% of the participating municipalities have fiscal years that begin January 1 or July 1.

The annual required contributions shown in the required supplementary schedule represents the summation of each participating municipality's contribution requirements for its fiscal year commencing in the year stated. However, the calculations to determine the percentage contributed use the contributions recorded during MERS fiscal year.

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the dates indicated. Additional information as of the latest actuarial valuation is in the Actuarial Section.

# **Summary Information**

Valuation Date December 31, 2011

Actuarial Cost Method Entry Age Normal

Amortization Method Level Percent of Payroll, Open

Remaining Amortization Period There are 27 years for positive unfunded liabilities,

and 10 years for negative unfunded liabilities. The 27-year period will decline by one year in each of the following seven annual valuations. For closed divisions (new hires are not covered by MERS defined benefit plan or hybrid provisions in a linked division) of active municipalities, the amortization period for positive unfunded liabilities is decreased annually by 2 years until the period reaches 5 years.

Asset Valuation Method A 10-year smoothed market asset valuation

method was adopted December 31, 2005, with a prospective application. Prior to 2006, a 5-year

smoothing method was used.

Actuarial Assumptions Investment Rate of Return – 8%

**Projected Salary Increases** A 4.5% for base inflation, plus 0.0% to 8.4% per

year attributable to merit and longevity. For the 2010 through 2013 valuations, the base wage inflation

assumption will be 1% instead of 4.5%.

Post-Retirement Benefit A 2.5% annual post-retirement benefit adjustment –

if adopted by individual municipalities.

# REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

Schedule of Funding Progress – (Dollars in Millions)

Actuarial Valuation December 31	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded (Over) AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)/c)
2006	\$5,493.8	\$7,187.7	\$1,693.9	76.4%	\$1,545.9	109.6%
2007	5,973.0	7,723.9	1,750.9	77.3%	1,581.6	110.7
2008	6,245.5	8,321.9	2,076.4	75.0%	1,624.9	127.8
2009	6,443.1	8,534.7	2,091.6	75.5%	1,636.5	127.8
2010	6,945.4	9,317.2	2,371.8	74.5%	1,684.0	140.8
2011	7,150.5	9,844.4	2,693.9	72.6%	1,669.7	161.3

Schedule of Employer Contributions – (Dollars in Millions)

Fiscal Year	Annual Required Contribution	Percentage Contributed
2007	\$258	92%
2008	224	109
2009	229	113
2010	264	110
2011	266	<u>111</u>
2012	288	108

Schedule of Administrative Expenses for the Year Ended December 31, 2012

Personnel Services	
Salaries	\$9,859,682
Social Security	721,309
Retirement	1,133,274
Insurance	1,898,420
Total Personnel Services	13,612,685
Professional Services	
Third Party Administrator	1,446,374
Actuarial Services	1,424,049
Audit Services	222,142
Commercial Banking	
Computer Consultant/Maintenance	
Consultants	1,618
Legal Services	172,344
Medical Services	57,250
Total Professional Services	3,682,127
Communication  Advertising / Drometional Cumpling	04.000
Advertising / Promotional Supplies	24,223
Annual Meeting	90,625
Board Travel and Meetings	47,199
Library and Records Storage	20,516 183,634
Postage / Shipping Printing and Copying Services	
Telephone / Communications	241,719
Travel and Meetings	392,855
Fotal Communication	1,108,432
Rentals	
Equipment Rental	82,091
Office Rental	687,600
Total Rentals	769,691
Miscellaneous	
<u>Depreciation</u>	2,048,221
Equipment Purchases	71,392
Insurance	262,215
Building / Equipment Maintenance	329,483
Office Supplies	92,741
Operating Expenses	5,174,068
Payroll Processing	19,847
Personnel Support	230,526
Professional Development & Tuition	264,325
Software Purchases and Maintenance	1,154,658
Subscriptions / Memberships	36,776
Service Fees Fotal Miscellaneous	(3,003,593)
Total Misochanous	0,000,000

Note: See accompanying Independent Auditor's Report.

Schedule of Investment Expenses for the Year Ended December 31, 2012

Investment Expenses	
Personnel Services	
Salaries	\$1,135,674
Social Security	71,974
Retirement	133,164
Insurance	152,490
Total Personnel Services	1,493,302
Professional Services	
Commercial Banking	1,055,791
Investment Managers	14,948,460
Investment Performance	102,000
Other Consultants	125,245
Total Professional Services	16,231,496
Communication	
Travel	69,761
Total Communication	69,761
Miscellaneous	
Memberships	10,749
Operating Expenses	19,171
Software Purchases/Maintenance	141,991
Total Miscellaneous	171,911
Total Investment Expenses	\$17,966,470

Note: See accompanying Independent Auditor's Report.

# Schedule of Payments for Consultants and Services

Firm	Nature of Service	Amount
Tegrit Financial Group, LLC	Software Development, Implementation and Support Services	\$3,020,634
Tegrit Administrators, LLC	Third Party Administration	1,473,094
State Street Bank and Trust Company	Depository Trust Banking Services	1,238,524
Tegrit Actuarial Consulting, LLC	Actuarial Services	458,790
Andrews Hooper Pavlik PLC	Auditing Services	192,100
Epicor Software Corporation	Software Implementation and Configuration Services	127,293
Resources Global Professionals	IT Consulting Services	123,634
Logicalis	Telecom Integration and Support Services	68,432
Consulting Physicians	Medical Advisor	57,250
Ice Miller	Legal Counsel	51,229
Miller Canfield	Legal Counsel	50,240
Innovative Comm	Audio Visual Equipment Installation and Support Servives	46,499
Gallagher Benefit Services	Benefits Consultant	35,000
Elizabeth Schwartz	Legal Counsel	20,100
Michigan Legislative Consultants	Legislative Consultants	18,000
Presidio Networked Solutions	Software Consulting and Configuration Services	17,000
Karoub Associates	Legislative Consultants	12,000
Maner Costerisan	Software Support Services	11,978
Pro-Tech Cable	Cable Installation Services	11,355
HTC Global Services Inc	Software Implementation Services	6,150
Mark Jasonowicz, CPA, PLLC	Auditing Services	6,000
Summit Technology, Inc	Unix System Implementation and Configuration Services	2,813
Reinhart Boerner Van Deuren	Legal Counsel	513

Note: Fees paid to investment managers are included in the Investment Section. Payments to consultants are already included in the Administrative and Investments Expenses stated in the Statement of Changes in Plan Net Position.

Note: See accompanying Independent Auditor's Report.

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# INVESTMENT SECTION

# **Prudent Investment**

Our Investments Department, under direction of the Retirement Board, provides strict oversight and due diligence of our investment managers, available investment funds for our participant-directed programs, and ensures our programs meet our standards of security and stability for our members.

# CHIEF INVESTMENT OFFICER REPORT

#### Dear Members and MERS Retirement Board:

I respectfully submit the investment activity report for the Municipal Employees' Retirement System (MERS) of Michigan's Comprehensive Annual Financial Report for the fiscal year ending December 31, 2012.

As always, our goal as prudent investors is to provide our member municipalities with effective returns at efficient costs, while protecting the pensions and assets of our many members. Our investment returns consistently outperform our benchmarks and market averages, with a prudent, long-term approach designed to provide downside protection and upside market participation.

#### **Economic Overview**

The effects of the global economic crisis which began in 2008 are beginning to recede, but the systemic issues which precipitated what is now known as the "Great Recession," continue to play out in the global markets. Slower growth in the developed world should be expected for the medium term. As generational transfer policy issues are addressed heightened market and political volatility will continue. Last year saw several events impact the investing environment: the surprising calm of the European credit crisis, reduced volatility, the U.S. election, continued political dysfunction, and an upward movement of risk assets. Global central banking activity remained accommodative and is likely to remain so through 2014. While markets have stabilized, systemic risks will remain elevated for the medium term. The deleveraging of developed governmental balance sheets is at best a third of the way complete in contrast to the business and consumer sectors. As this process continues, expect significant market movements to present both opportunities and challenges.

The global financial markets posted strong returns throughout the year across all asset

classes. Chinese economic activity began to increase as that country seemed to have avoided a hard landing. The U.S. resolved its electoral issues and is moving slowly toward addressing its structural budgetary concerns. The most recent quarterly GDP numbers show the Eurozone GDP at -0.6% and the U.S. GDP at 1.6% for the 4th guarter with 2.2% U.S. GDP for 2012. U.S. growth slowed in the 4th quarter due largely to cut backs in government spending and tax increases. The housing market saw positive upward momentum with the Case-Shiller index up 8% for the year. Unemployment in the U.S. has continued to remain high at 7.9% and the U6 unemployment at 14.4%, although these numbers are steadily improving as new jobs are being added. In the private sector job growth has increased on average 160,000 jobs per month for 2012. The deleveraging process will negatively impede top line GDP growth for several years to come. A more opportunistic and patient investment approach will be necessary to maximize returns. Industry specific factors and potential inflationary pressures may lead to continued asset price appreciation despite slower economic growth. Lastly, it is worth mentioning that equity markets tend to be leading indicators and current trends should be viewed positively.

#### MERS Total Market Fund

Regardless of economic and financial turmoil, the defined investment objective of the MERS fund is to grow assets at a rate which, when coupled with contributions, satisfies earned benefits to our members. The Office of Investments strives to achieve a real rate of return of at least 3.50% annually over the rate of inflation and/or exceed the actuarial assumption rate of 8.00% annually. On an absolute return basis, the MERS Office of Investments strives for better performance, but feels confident about MERS performance relative to our benchmarks.

#### MERS 2012 highlights:

- The MERS Total Market Fund return for 2012 was 11.39% gross of investment fees, which outperformed the actuarially assumed rate of 8.00% by 3.39%.
- The MERS Total Market Fund underperformed its custom policy benchmark gross of investment fees by only 0.04%. This performance is a testament of MERS portfolio asset allocation, active management, and tactical decision-making. The MERS portfolio is specifically designed to provide downside protection during turbulent markets.
- At the broad asset class level, absolute returns gross of investment fees for the year were as follows:

Total Equity	17.88%
Real Estate	13.84%
Fixed Income	6.02%
High Yield	12.69%
Commodities	6.87%
Private Equity	0.50%
Cash	1.12%

In conclusion, I would like to thank the Retirement Board, the fiduciaries of the MERS Plan, for their continued support of the Office of Investments. The clarity of MERS governance structure and the functional checks and balances has allowed the investment program to be successful for our members. This relationship makes for a more efficient decision-making process, benefiting our membership through stronger, risk-adjusted returns.

#### Respectfully,

Jeb Burns, Chief Investments Officer

# REPORT ON INVESTMENT ACTIVITY

MERS is organized for the express purpose of using its collective resources to ensure that its member municipalities have sufficient financial resources to meet the pension obligations that each is individually responsible for under the State of Michigan's Constitution 1963, Article 9, Section 24. MERS is authorized to create subsidiary entities and to provide additional benefits and savings programs to its members at the direction of the Retirement Board. See PA 490 of 2004, Section 36(2)(a); MCL 38.1536(2)(a).

The MERS Retirement Board (Board), as "investment fiduciary" under the Public Employee Retirement System Investment Act (PERSIA), PA 314 of 1965, has the fiduciary responsibility and authority to direct the Retirement System's investment program. Members of the Board must follow the state law and prudent standards of diligence consistent with "discharging their duties for the exclusive benefit of plan participants." The prudent person standard requires that the Board "exercise the same judgment, care, skill, prudence, and diligence under the circumstances which persons acting in a like capacity and familiar with such matters would use in the conduct of a similar enterprise with similar aims." MERS has a Defined Benefit Plan, Defined Contribution Plan, Hybrid Plan, 457 Supplemental Retirement Program, Health Care Savings Plan, Retiree Health Funding Vehicle, and Investment Services Program. MERS' Retirement Board (Board) has granted full discretion to manage all investment management operations and activities to MERS Office of Investments, except those specifically reserved for the Board.

The Investment Policy Statement (IPS) outlines the investment goals, objectives, and policies of the Fund. The purpose of the IPS is to ensure that the investment activities are carried out within the framework established by MERS policy and administrative documents. The IPS assists the Board, Investment Committee, and staff in effectively monitoring MERS' investment

program and offers a map to assist in making prudent and informed investment decisions. This IPS addresses the following issues:

- The goals of MERS' Investment Program;
- Investment policies;
- Performance objectives and evaluation;
- Major investment programs; and
- Investment processes and procedures.

The IPS is designed to provide sufficient flexibility in the management and oversight process to reflect the dynamic nature of the capital markets. It will serve as a working document and may be modified as needed or as market conditions change. At a minimum, the IPS will be updated annually and approved by the Board.

In accordance with GASB 25, plan investments are presented at fair value. Short-term investments are valued at cost plus accrued interest, which approximates fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Corporate bonds not traded on a national or international exchange are based upon equivalent values of comparable securities with similar yield and risk. Independent appraisals are the basis for valuing the fair value of real estate. Other investments that do not have established markets are recorded at an estimated fair value. Real estate, private equity, and certain alternative investments typically have a quarter lag in reporting, which is an industry standard. Periodic and independent appraisals of these assets are carried out to ensure an accurate valuation to assist in properly assessing the value of the total fund.

MERS uses a time weighted rate of return calculation methodology based on the market rate of return for the schedule of investment results in the CAFR.

# A. DEFINED BENEFIT PLAN

# INVESTMENT OBJECTIVES AND ACTIVITY

In conformity with PERSIA, the primary goal of MERS' Investment Program is to grow assets at a rate which, when coupled with employer and employee contributions, satisfies promised benefits to MERS members. This should be done with a high degree of prudence to reduce risk. The following objectives are intended to assist in achieving this goal:

- Maintain the stability of the Plan's funded status
- Maintain adequate liquidity to pay promised benefits
- Adopt a strategic asset allocation plan that reflects current and future liabilities, minimizes volatility and maximizes the long-term total rate of return
- Minimize the costs associated with implementation of the asset allocation through the efficient use of internal and external resources
- Exceed the actuarial investment assumption on a long-term basis, which is currently 8% annually. More specifically, earn a minimum real rate of return of at least 3.5% per year above inflation
- Maintain above median peer rankings for the 3, 5, and 10-year time periods
- Exceed the return of the Fund's Policy Benchmark. The Policy Benchmark currently consists of:

Index	Weighting
Barclays Aggregate Bond Index	30%
S&P 500 Index	20%
Russell 2000 Index	15%
Custom Real Estate Index*	7%
Russell Micro Cap Index	5%
MSCI EAFE Index	5%
MSCI Emerging Markets Index	5%
BofA Merrill Lynch High Yield Master II	5%
DJ UBS Commodities Index	5%
Citigroup 91-day T-bill	3%

# PORTFOLIO HIGHLIGHTS

#### **Asset Allocation**

The Fund's asset allocation is the single most important determinant of achieving the stated investment goals. The Office of Investments conducts a full asset allocation study every three years to assess portfolio construction and strategy. MERS adopts and implements an asset allocation policy that is predicated on a number of factors, including:

- A projection of actuarial assets, liabilities and benefit payments, and the cost of contributions:
- Historical and expected long-term capital market risk and returns;
- Expected correlations of returns among various asset classes;
- An assessment of future economic conditions, including inflation and interest rate levels;
- Various risk/return scenarios; and
- Liquidity requirements.

#### Criteria for Inclusion of Asset Classes

The following criteria will be used in assessing an asset class for inclusion in the Fund:

- Sufficient size and liquidity to permit an investment by the Fund;
- Staff and consultant expertise to ensure proper due diligence and cost-effective implementation;
- The incorporation of the asset class contributes to the return enhancement and/ or further diversification of the Fund's assets; and
- Ability to readily measure performance and risk against appropriate benchmarks.

# Portfolio Weighting Guidelines

- New investment strategies (asset classes or sub-asset classes) will be given:
  - A minimum weighting of 2% of the total portfolio and a maximum weighting of 5% of the total portfolio
  - Allocations may be increased above the 5% threshold after successful integration into the portfolio
  - Strategies may be allocated among several managers to reduce risk
- Each manager will have a maximum allocation of 15% of the Total Fund

The Board adopted the most recent asset allocation study in July 2010. The current plan is:

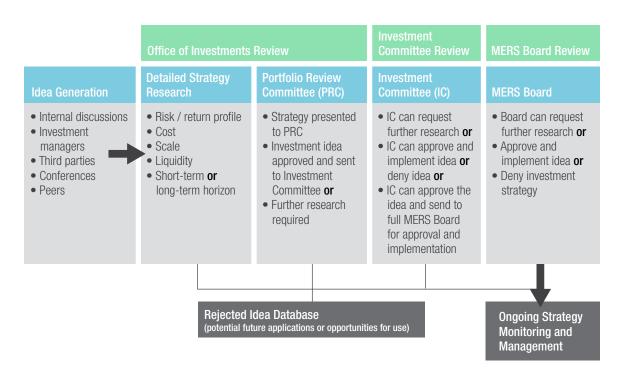
Domestic Equity	34.5%
International Equity	10%
Fixed Income	30%
High Yield	5%
Real Estate	7%
Private Equity	7%
Commodities	5%
Cash	1.5%

# **Tactical Asset Allocation**

As the financial markets and economic conditions change, certain asset classes become more favorable than others. Therefore, it is necessary to engage in short-term, tactical deviations from the strategic allocation in order to capitalize on unusual or exceptional investment opportunities. Since the markets are so dynamic, these moves will be made very quickly in an effort to take advantage of short-term, systemic inefficiencies and broad-market trends. MERS Office of Investments feels that engaging in such tactical deviations is necessary to produce superior investment returns from a risk/return perspective.

# **Investment Strategy Implementation Process**

The team is well positioned to identify appealing investment opportunities through the use of a variety of quantitative and qualitative tools. These tools include insight from existing investment managers, research databases, third-party research, and financial publications, among numerous others. There is no timetable for these tactical deviations, but they will typically have a duration of less than one year. Once the short-term opportunities have run their course, the portfolio will be rebalanced to the overall strategic asset allocation.



# **INVESTMENT THEMES**

As the Total Market Fund continues to evolve, several prevalent themes have emerged as guideposts for the Fund's structure. These broad-based themes will continue to be strongly considered in our decision-making process as we look for investment opportunities to exploit them. We feel successful integration of these themes into the fund will help exceed the stated fund objectives. Naturally, new themes will emerge over time and replace existing themes.

#### Global Growth

Rapid economic growth in emerging markets such as China and India has created tremendous investment opportunities. Furthermore, population growth will continue to put strain on the world's supply of critical resources. Conversely, the aging of the developed world will create other risks and opportunities. MERS has made numerous investments in an effort to diversify the portfolio and take advantage of these trends and will continue to do so. Currently there is a strong preference toward investing in the U.S. over developed Europe and prudently increasing our emerging market exposure over the medium term.

#### Active/Passive Mix

The Fund will exhibit a more passive approach in more efficient asset classes. Active management will continue to be utilized in less efficient areas of the market (small/micro cap, emerging markets, credit, etc.) where it has proven to be additive. A more passive approach allows for greater flexibility to invest in unique investment opportunities and reduces management fees without sacrificing returns.

# Opportunistic Investing

In an effort to further diversify the portfolio and capture additional alpha, MERS Office of Investments will continue to seek out opportunistic investments. This may result in the portfolio maintaining higher cash balances during certain time periods.

# **Expanded Mandates**

In an effort to give managers a better opportunity to deploy their skill and create alpha, the Fund will move toward expanded mandates for managers. This will result in the blurring of traditional style boxes for managers.

#### Mean Reversion

Mean reversion is one of the few predictable components of investing — that returns eventually move up or down toward the mean. Thus, our policies and procedures are designed to exploit mean reversion throughout all levels of the portfolio.

#### **Private Investments**

Private investments will be looked at through an opportunistic lens and will only be considered to the extent that the reward outweighs the drawbacks (illiquidity and expenses). It is recognized that with the institutionalization of alternative investments, returns will likely be compressed. An effort will be made to make more direct investments and select funds internally to reduce expenses and increase returns. Public investments will be favored all things being equal.

# TOTAL MARKET FUND REVIEW

MERS investments generated a gross return of 11.39% for calendar year 2012 using a time-weighted rate of return based on the market rate of return of the portfolio. Performance across all asset classes varied during the year with real estate and international equities generating some of the highest returns, 13.84% and 16.12%, respectively. They were only exceeded by MERS domestic equity, which returned 18.36%.

Asset Class Performance for 2012 (gross of fees) and Contribution to Total Return

Туре	2012 Gross Returns	Contribution to Total Return
Domestic Stocks	18.36%	0.53
International Stocks	16.12	-0.52
Fixed Income	6.02	0.78
High Yield	12.69	-0.02
Real Estate	13.84	0.12
Private Equity	0.50	<u>-1.15</u>
Commodities	6.87	0.29

# Portfolio Rebalance Policy

MERS adopted a new asset allocation effective July 2010; the Investment Guidelines have been officially amended to reflect this new asset allocation. To ensure that the portfolio remains within the asset allocation parameters established by the Board, the following rebalancing policy has been established. This policy should minimize unintended drift from MERS strategic asset allocation, allow tactical shifts to take advantage of market conditions, and ensure that adequate cash levels are maintained to meet ongoing pension fund expenses. Systematic rebalancing should reduce volatility and increase portfolio returns over the long term.

# Daily Review and Optional Rebalance

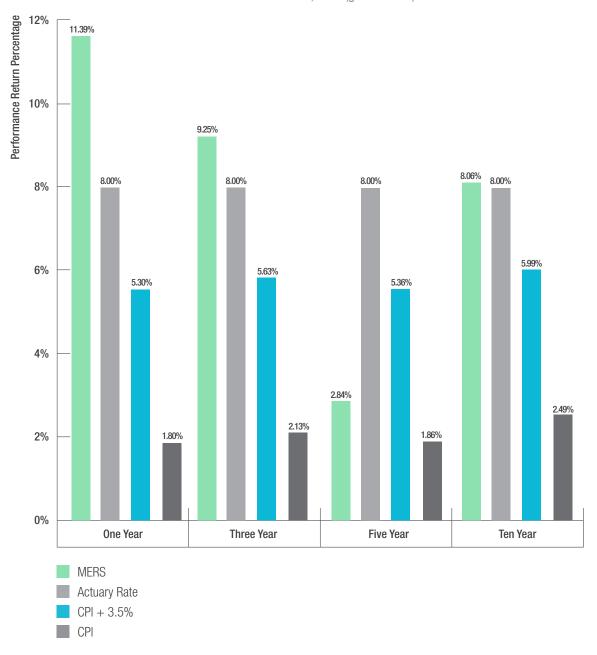
In an effort to minimize tracking error at the Total Fund level, the Office of Investments works with the Clifton Group to monitor allocations and implement a policy overlay using index futures. Asset allocation levels for the following asset classes are monitored daily in relation to the predetermined variation bands, and rebalanced using the appropriate index futures:

Asset Class	Variation Band %	Index Futures
Domestic Equity	± 10%	S&P 500, S&P 400, or Russell 2000 Index
International Equity	± 20	MSCI EAFE Index
Emerging Markets Equity	± 20	MSCI EM Index
Fixed Income	± 10	Barclays Capital Aggregate Bond Index
Commodities	± 20	Goldman Sachs Commodity Index

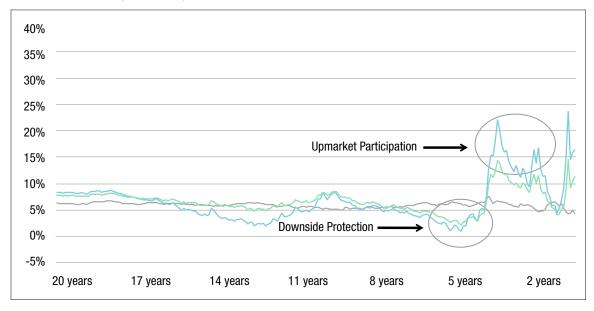
# Annual Portfolio Rebalance

The Office of Investments monitors the portfolio's asset allocation on an ongoing basis making strategic and tactical adjustments within the guidelines of the plan. MERS feels that a more robust portfolio-rebalancing regimen can add additional value and reduce the overall risk to the portfolio in certain market environments.

Performance Versus Custom Benchmarks as of December 31, 2012 (gross of fees)



Downside Protection Upside Participation as of December 31, 2012



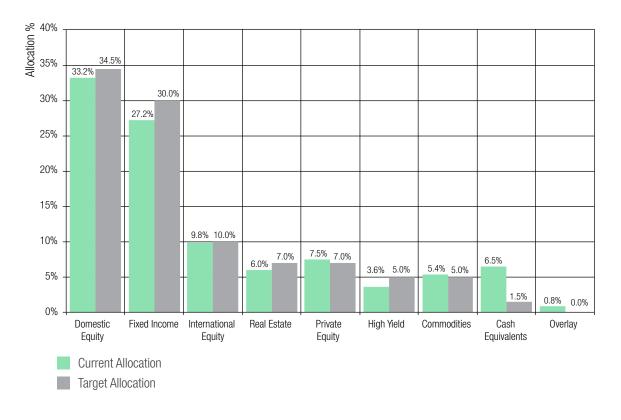
Barclays US Aggregate Bond Index

MERS

Russell 3000

Diversification is a portfolio strategy designed to reduce exposure to the volatility of returns by combining a variety of investments (such as stocks, bonds, real estate, and commodities) which are unlikely to all move in the same direction. The goal of diversification is to reduce the risk in a portfolio. While it is impossible to foresee all market risks, the strategic goal of the MERS asset allocation policy and the MERS Total Market Fund is to create a well-diversified portfolio that provides downside market protection with upside market participation.

Current Asset Allocation versus Target Allocation as of December 31, 2012



Statistical Performance (gross of fees)

Portfolio Characteristics	1 Year	3 Year	5 Year	10 Year
Annualized Return (gross of fees)	11.39%	9.25%	2.84%	8.06%
Annualized Standard Deviation	6.96	9.41	12.00	9.57
Sharpe Ratio	1.62	0.97	0.20	0.67
Excess Return	-0.04	0.84	-0.18	0.38
Beta	0.97	0.90	0.86	0.88
Correlation to Policy Benchmark	0.98	0.99	0.99	0.99

# **Commission Recapture**

MERS requests that all domestic equity managers direct a target of 25% of commission trades with the State Street Global Markets LLC (SSGM) for the purpose of commission recapture. Notwithstanding these instructions, brokerage transactions in the normal course of business should only be directed to this broker if in so doing the obligation to achieve best execution of the Total Market Fund's transactions is fulfilled. The SSGM program provides a network of brokers with whom trades can be executed. MERS has the ability

to waive commission recapture participation for investment managers via their investment guidelines as certain strategies are more sensitive to trade execution (i.e. micro cap). The recapture commissions are shared based on a contractually-negotiated split of 90% MERS / 10% broker. Recapture dollars are used to offset the administrative, custodial, accounting, and performance measurement costs incurred by the fund. For 2012 \$108,969 was directed by equity managers to SSGM of which \$98,014 was rebated to MERS.

# **Securities Lending**

MERS participates in the securities lending program at State Street Bank. Income earned from participation in the program is credited to each portfolio within 15 business days of the previous month's end. The goal of the securities lending program is to enhance the overall income of the Plan and to help offset investment management related expenses.

Securities Lending 2012 Rebates and Fees

	Gross Earnings	Rebates	Agent Manager Fees	Net Earnings
	*			
First Quarter	\$1,102,658	\$68,773	\$206,694	\$827,191
Second Quarter	1,192,583	139,522	210,537	842,524
Third Quarter	1,416,321	140,543	255,070	1,020,708
Fourth Quarter	1,494,872	159,881	266,865	1,068,126
Totals	\$5,206,434	\$508,719	\$939,166	\$3,758,549

Investment Summary for Defined Benefit Plan, Retiree Health Funding Vehicle, Health Care Savings Program, 457 Supplemental Retirement Program and Investment Services Programs as of December 31, 2012

Type of Investment	Market Value
Fixed Income Domestic and International Fixed Income	\$2,307,555,447
Total Fixed Income	2,307,555,447
<b>Equities</b> Domestic and International Stock	3,209,834,892
Total Equities	3,209,834,892
Private Equity & Commodities Private Equity Commodities	558,451,250 396,802,951
Total Private Equity & Commodities	955,254,201
Real Estate Real Estate	444,998,480
Total Real Estate	444,998,480
Subtotal Investments	6,917,643,020
Cash Equivalents Cash Equivalents	479,384,425
Total Cash Equivalents	479,384,425
Total Investments & Cash	\$7,397,027,445

Reconciliation of Investments to Financial Statements

Total Investments from above	\$7,397,027,445
Receivables - Sale of Investments, Interest & Dividends	(913,099,495)
Bonds in default	(860,292)
Small adjustment	(2)
Investments not in MERS State Street' portfolio	291,432,099
Cash at State Street	(33,659,808)
Payables - Purchases of Investments	893,463,701
Investments on Financial Statements	\$7,634,303,648

Note: Includes receivables and payables for sales and purchases of securities with settlement dates after December 31, 2012.

# **EQUITY ASSET CLASS SUMMARY**

As of December 31, 2012, the public equity portfolio had a market value of \$3.18 billion, representing 43.0% of the Total Market Fund. Performance for the total equity portfolio was 17.88% gross of fees for the year.

MERS maintains a significant allocation to publicly traded shares of corporations around the world. Broad exposure to the public equity markets is paramount to achieving the Fund's stated objectives and delivering the actuarial rate of return of 8%. The public equity portfolio has a target allocation of 44.5% of the total Fund. As of December 31, 2012, the portfolio includes domestic equity, international developed equity, and emerging and frontier markets equity. Exposure is achieved through portfolios diversified by geographic region, styles, sectors, and market capitalizations. Active management is used to take advantage of less efficient areas of the market while passive management is deployed in more efficient areas and used to reduce fees. Allocations are monitored in relation to asset class bands on an ongoing basis and rebalances take place if deemed appropriate. This portfolio is expected to perform well in periods of low to falling inflation and rising economic growth. It is also expected to provide ongoing income through dividend payments as well as downside protection in volatile markets. Fiscal year 2012 was relatively calm in terms of activity within the public equity portfolio. Several incremental asset allocation shifts were made throughout the year, but the portfolio remained relatively unchanged from the prior year. The following activities are noted:

- Funded an internal, active micro cap equity portfolio, and hired an emerging micro cap manager
- Microcap Equities were the highest performing segment in the equity space for the year
- Equities and active management were the primary contributors to the funds' success
- During the year, one manager was hired and two managers were terminated.



# **Market Commentary**

During 2012 the "fiscal cliff" threatened significant tax increases and spending cuts. Political accommodation was expected given the extreme effects of a stalemate. Compromise was finally reached in the Senate on December 31, approved in the house on January 2nd , and was signed by President Obama. While negotiations were taking place throughout the year, many feared the ultimate outcome would negatively affect the markets and economy. However, patient investors found 2012 to be a successful year with equity markets earning double-digit returns. The Russell 2000 finished the year up 16.35% while the S&P 500 was up 16.00%. International equities also experienced double-digit returns with small cap and Emerging Markets leading the way. The MSCI ACWI ex U.S. index returned 17.39% for the year and the MSCI EAFE returned 17.32%. Emerging markets were the top performing subasset class, returning 18.63% with frontier markets trailing with only 9.25% in positive returns.

Public Equity Performance as of December 31, 2012 (gross of fees)

Portfolio Characteristics	1 Year	3 Year	5 Year	10 Year	
Total Equity	17.88%	9.95%	0.65%	8.68%	
Msci World Index Net Daily	15.83	6.93	-1.18	7.51	
Excess	2.05	3.02	1.83	1.17	
Domestic Equity	18.36	12.27	2.45	8.48	
Russell 3000 (Daily)	16.42	11.20	2.04	7.68	
Excess	1.94	1.07	0.41	0.80	
International Equity	16.12	2.83	-4.27	9.05	
Msci Acwi Ex US Gross (Daily)	17.39	4.33	-2.44	10.22	
Excess	-1.27	-1.50	-1.83	-1.17	

Top 10 Equity Holdings as of December 31, 2012

Asset Description	Market Value	Percentage of Total Market Value
Apple, Incorporated	\$46,653,450	0.63%
Google, Incorporated	15,740,210	0.21
The Toro Company	14,217,784	0.19
Portfolio Recovery Associates, Incorporated	13,995,988	0.19
Qualcomm, Incorporated	13,371,698	0.18
Exxon Mobil Corporation	12,783,435	0.17
Oracle Corporation	12,499,031	0.17
Amazon.com, Incorporated	11,253,834	0.15
JPMorgan Chase and Company	10,674,816	0.14
Equifax, Incorporated	10.417.787	0.14

Note: A complete list of portfolio holdings is available upon request.

# Public Equity – Investment Managers

Investment Manager	Style	Portfolio Market Value
External Investment Manager		
Blackrock	Frontier Markets Enhanced Index	\$79,077,090
Acadian	International Small Cap	175,530,597
Driehaus	All-Cap Global Growth	320,127,784
Mountain Pacific	Emerging Markets	51,549,438
HEXAM	Emerging Markets	100,978,059
Wellington	Large Cap U.S. Growth	215,961,511
Mellon Tangent Added TAA	Large Cap Core/Value	384,608,827
AMBS Investment	Large Cap U.S. Value	30,280,667
Punch Investments	Micro Cap	89,711,145
Morgan Dempsey	Micro Cap	76,746,789
Eudaimonia	Micro Cap	76,022,855
Kennedy Capital	Micro Cap	80,310,604
Downriver Capital	Micro Cap	26,625,684
C.S. McKee	Small Cap U.S. Core	191,276,804
Irving Magee	Small Cap U.S. Value	167,120,758
Kennedy Capital	Small Cap U.S. Value	198,232,443
Hellman Jordan	All-Cap U.S. Core	55,322,543
Seizert Capital	SMID Cap U.S. Value	29,477,609
Wellington	Mid Cap U.S. Core	201,674,276
Internal Investment Manager		
MERS S&P 400	S&P 400 Index	188,172,846
MERS S&P 500	S&P 500 Index	410,307,795
MERS Micro Cap	Active Micro Cap	30,280,896

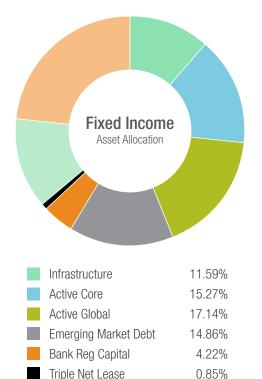
# FIXED INCOME & HIGH YIELD ASSET CLASS SUMMARY

As of December 31, 2012, the Total Fixed Income portfolio had a market value of \$2.28 billion representing 30.80% (fixed income of 27.20% and high yield of 3.60%) of the Total Market Fund. Performance for fixed income and high yield was 6.02% and 12.69% gross of fees, respectively.

# **Fixed Income**

Fixed income is the base of the MERS Total Market Fund, providing exposure to high quality securities that provide stable cash flow and liquidity to the overall portfolio. Total fixed income assets, excluding high yield, were \$2.01 billion as of December 31, 2012, and were allocated into eight strategies (see pie chart below). Fixed income provides meaningful diversification to the Total Market Fund, covering a variety of different macroeconomic environments. Core fixed income tends to perform well in times of falling economic growth and stable to falling inflation. During the year one manager was terminated and three were hired.

In mid-2012 the fixed income portfolio changed from a traditional strategy to a core and satellite approach. A core and satellite investment strategy incorporates a passive "core" component and an "active" satellite element. A core investment is the central part of a portfolio. It demands that the investment be steadily reliable throughout the year preserving capital and liquidity. Core is the foundation from which the rest of the portfolio is built. However, the satellite component is where the strategic deployment of active risk occurs, both short term and long term. The main purpose for this approach is to provide the opportunity to earn greater returns than those generated by the core portion of the portfolio.



12.90%

23.17%

**Short Duration** 

Core Plus

# **Market Commentary**

Fixed income returns were lower than equity markets for 2012, but still outpaced inflation. All sectors of the bond market produced positive returns. Corporate bonds outperformed the broader bond market by a wide margin during this period. They were more attractive than government bonds due to higher yields and the continued improvement in the health of U.S. corporations which led to capital appreciation within the asset class. Corporate profits increased in 2012 and dividend payments increased by more than 15%, reflecting healthy corporate balance sheets amidst a backdrop of slow economic growth.

Treasury yields remained depressed throughout 2012, with the 10-year reaching a record low yield of 1.38% in July 2012. The record low yield environment reflects investors favoring quality assets while fearing macroeconomic risks and slow growth.

Municipal bonds, while sustaining more than their share of bad news in 2012, still delivered respectable returns. While the states' fiscal health is improving, local governments continue to face financial challenges; expenses continue to expand faster than revenues. Regardless of this issue, municipal bonds generated solid gains due to low Treasury rates and favorable supply and demand. Investors continued to take advantage of their attractive yields, driving prices higher.

Fixed Income Performance as of December 31, 2012 (gross of fees)

	4.4	ov.	5.7	40.1/
	1 Year	3 Year	5 Year	10 Year
Fixed Income BC Aggregate (Daily)	6.02% 4.21	7.35% 6.19	6.45% 5.95	6.07% 5.18
Excess	1.81	1.16	0.50	0.89

Top 10 Fixed Income Holdings as of December 31, 2012

Asset Description	Market Value	Percentage of Total Market Value
GNMA Pool 5.0% 9/15/2039	\$24,140,815	0.33%
Fannie Mae 6.0% 4/18/2036	22,267,051	0.30
United States Treasury 1.25% 7/15/2020	18,338,899	0.25
United States Treasury 0.5% 4/15/2015	16,864,799	0.23
Fannie Mae 5.5% 4/1/2036	15,880,572	0.21
Federal Farm Credit Bank 1.0% 1/17/2017	12,347,053	0.17
United States Treasury 0.625% 4/15/2013	11,508,534	0.16
United States Treasury 1.75% 4/15/2014	11,183,480	0.15
Canada Housing Trust 3.15% 6/15/2014	11,155,228	0.15
Fannie Mae 6.0% 3/1/2037	11.082.055	0.15

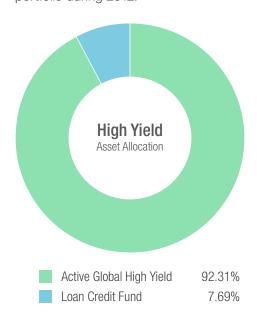
Note: A complete list of portfolio holdings is available upon request.

# Fixed Income – Investment Managers

Investment Manager	Style	Portfolio Market Value
External Investment Manager		
Credit Suisse	Infrastructure	\$233,474,039
C.S. McKee	Core Fixed Income	307,546,646
First International Advisors	Global Bonds	345,100,682
Janus Capital Management	Core Plus	466,484,642
Janus Capital Management	Short Duration	259,720,625
Oak Street Real Estate Capital	Triple Net Lease	17,171,832
Orchard Global Capital	Bank Regulatory Capital	84,908,437
TCW	Emerging Market Debt	299,294,023

# **High Yield**

The MERS high yield allocation provides additional diversification to the Total Market Fund through allocations to domestic and global high yield, emerging markets, and inflation-protected securities. Total high yield assets as of December 31, 2012, were \$264,322,552 and were allocated into two strategies (see pie chart below). The strategy employs opportunistic mandates that seek to capitalize on market inefficiencies. A blended approach is expected to deliver returns in excess of U.S. high yield benchmarks with less volatility. One manager was terminated from the high yield portfolio during 2012.



# **Market Commentary**

High yield bonds produced strong positive performance in 2012, as the ultra-low rates on safer assets caused investors to gravitate to the more attractive income available in this area. The Bank of America Merrill Lynch U.S. High Yield Master II Constrained Index posted a positive total return of 15.58% as of December 31, 2012. High yield was also pushed by the improvement in the financial health of the underlying issuers, as seen in the rising earnings and strengthening balance sheets of U.S. corporations. Many wonder if these trends will continue into 2013

High Yield Performance as of December 31, 2012 (gross of fees)

	1 Year	3 Year	5 Year	10 Year
High Yield BofAml High Yield Master II (Daily)	12.69% 15.58	12.04% 11.60	5.23% 10.01	8.66% 10.39
Excess	-2.89	0.44	-4.78	-1.73

High Yield – Investment Managers

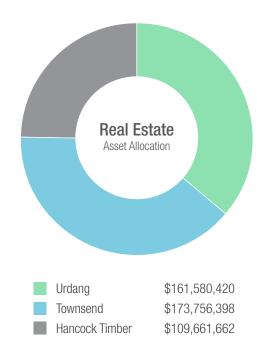
Investment Manager	Style	Portfolio Market Value
External Investment Manager		
Stone Harbor Stone Tower	High Yield/ EMD/ TIPS Loan Credit Fund	\$243,985,238 20,337,314

# **ALTERNATIVE ASSET CLASS SUMMARY**

As of December 31, 2012, the alternatives portfolio had a market value of \$1.40 billion representing 18.9% (real estate of 6.00%, commodities of 5.40%, and private equity of 7.50%) of the Total Market Fund. Performance for real estate, commodities, and private equity was 13.84%, 6.87%, and 0.50%, respectively.

### **Real Estate**

MERS real estate target allocation represents 7% of the total plan, and is diversified among private property partnerships, global real estate investment trusts (REITs), and timber partnerships. The allocation provides diversification, inflation protection, consistent income, and uncorrelated returns to the Total Market Fund.



# **Market Commentary**

# **Private Property**

The underlying momentum for economic growth has been moving up in recent months. The high demand for yield and the current cash flows in this asset class have contributed greatly

to the upward price movement. Commercial property markets improved in late 2012 despite uncertainty about the fiscal cliff. Construction activity remained low relative to demand across much of the commercial real estate market. However, the typical lag between the index movement and resulting construction spending indicated that construction activity will increase in the following 9 to 12 months, primarily driven by a large multifamily development pipeline. Vacancies across property types were lower through the fourth quarter of 2012. Private equity U.S. real estate transaction volume totaled approximately \$275 billion in 2012. The average capitalization rate, as reported by NCREIF, was 6.84% for the year.

### **RFITs**

REITs, as measured by the FTSE NAREIT Index, continued to perform well for the year returning 18.06%. There has been an increased demand for yield in REITs which, along with present cash flows, has added significantly to the mounting price movement.

Global Real Estate delivered healthy total returns in 2012 and this trend has carried through the New Year. For 2013, improving global economic growth will facilitate further increases in real estate cash flows through higher property occupancies and in cases where occupancy has reached/will reach equilibrium, higher rents. The best performing property sectors during the last quarter were Self Storage, Health Care, Industrial, and Regional Malls. Conversely, Mixed Office and Industrial, Manufactured Home Sites, Shopping Centers and Office lagged in comparison.

### **Timber**

MERS has invested in Timber since 1995, and has looked at this portion of the portfolio to provide diversification, current income, and capital preservation through its inflation-sensitive pricing characteristics. Due to the subprime mortgage crisis and related collapse of the U.S. housing market, demand for timber has suffered in recent years. As a result, returns from the asset class have been muted since 2008, with the five-year return coming in below 1% annually. Since inception, however, MERS' investments in timber have performed more as expected, generating an annualized return of 6.54% net of fees.

# **Market Commentary**

The outlook for North America timber markets will be determined by the timing and strength of the recovery of U.S. residential construction, which undeniably began in the second half of 2012. A unique characteristic of timberland, however, is that it functions as both a factory and a warehouse. This gives investors in timber the flexibility of harvesting trees when timber prices are up, and delaying harvests when prices are down. So while we would expect that the steep and swift recovery in US housing markets would fuel a rebound in U.S. lumber and timber markets, the deferred harvest over the previous five years will moderate the recovery in timber prices.

# Commodities

The MERS' commodities target allocation represents 5% of the Total Market Fund. Commodities exhibit low correlations to most traditional asset classes and therefore behave differently during market cycles. Unlike stocks and bonds, commodities are expected to perform well during periods of inflation creating a natural hedge in the portfolio. Exposure to the commodity markets is obtained through an enhanced swap agreement with Cargill and cattle exposure through a new manager hire, Australian Pastoral Fund. Only one manager was terminated from the commodities allocation. The commodities portfolio was further diversified with recent direct Investments in pastoral land in Australia. This investment will further diversify the portfolio, increase the correlation benefit, and capitalize on global population growth.

# **Market Commentary**

Commodities income at the 10 largest banks slumped 24% last year to \$6 billion. The Standard & Poor's GSCI Spot Index of raw materials climbed less than 0.3% in 2012, the worst performance in four years. Slower growth in China and below trend growth in the developed world is depressing prices. Things do not appear to be turning around for commodities in 2013. Low volatility and reduced client activity have caused a drop in commodity revenues in 2012. Increasing concerns about regulation and capital sensitivity also led banks to re-examine commodity strategies. The Dodd-Frank Act, the creation of which is being closely watched in anticipation of its completion, has already banned proprietary trading and designed rules to increase transparency in derivatives markets are among regulations. These changes and the fear of other possible restrictions have affected the processes and nature of this asset class.

# **Private Equity**

MERS private equity target allocation represents 7% of the Total Market Fund and its role within the portfolio is to provide diversification from public equity investments and enhanced returns, as compensation for the higher level of risk undertaken in this asset class. Investments in private equity include U.S. and international, venture capital, buyout, and special situation funds. Private Equity returns for the calendar year 2012 underperformed its benchmark, the Russell 2000 public equity index, primarily due to the different ways that results are reported. The Russell Index is marked to market daily, as the share prices of the publicly traded equities that comprise the Index are reported daily. Private Equity investments are valued quarterly by underlying investment managers, which use their opinions of current market conditions to arrive at internal valuations as of a given reporting date. The process of looking back at quarterly results and determining value in a look-back fashion creates a reporting lag relative to public equities, which can range from 6-12 months depending on the reporting requirements of underlying investments. As a result, some of the rally in the public equity markets that occurred in the second half of 2012 has yet to be reflected in private equity valuations, which accounts for some of the relative underperformance of the asset class.

It should also be noted that Private Equity is a long-term asset class and its performance is more fairly evaluated on a longer time horizon. The asset class has performed much better relative to its benchmark over longer time periods, exceeding the Russell 2000 index over the five and seven-year time periods. MERS staff expects that the portfolio of private markets investments will continue to provide long-term benefits for the Total Market Fund.

# **Market Commentary**

Deal volume in the private equity space showed modest improvement during 2012. According to S&P Capital IQ, North American target deal volume increased 4.1% to 17,423 transactions in 2012 from 16,730 in 2011. Strategic M&A improved 4.0% to 16,213 deals in 2012 from 15,586 in 2011, while leveraged buyout volume rose 5.8% to 1,210 from 1,144 transactions. Separately, non-buyout private equity investments fell 16.4% to 2,916 from 3,487 during the same period.

The dollar value of North American buyout transactions shrank 4.7% to \$1.02 trillion in

2012 from \$1.07 trillion in 2011. The bulk of the deal value is a result of strategic merger and acquisition transactions, which accounted for \$910.6 billion in dollar value in 2012. This is a decline 7.3% from the 2001 level of \$982.8 billion. The value of leveraged buyouts grew 23.4% to \$112.1 billion from \$90.8 billion, which is reflective the re-emergence of the mega-deal in 2012, which also grew the average deal size 16.7% to \$92.6 million from \$79.4 million in 2011.

# Alternative Performance as of December, 31, 2012 (gross of fees)

	1 Year	3 Year	5 Year	10 Year
MERS Real Estate	13.83%	8.05%	-0.70%	7.21%
MERS Custom Real Estate Benchmark	13.29	8.64	3.18	9.54
Excess Return	0.54	-0.59	-3.88	-2.33
MERS Comodities	6.87	6.71	-3.13	_
MERS Custom Commodities Index	-1.06	2.15	-8.33	-
Excess Return	7.93	4.56	5.20	-
MERS Private Equity	0.50	10.63	4.44	6.17
Russell 2000	16.35	12.25	3.56	9.72
Excess Return	-15.85	-1.62	0.88	-3.55

# Alternatives – External Investment Managers

Style	Portfolio Market Value
Private Real Estate Global REIT Timber	\$173,756,398 161,580,420 109,661,662
Enhanced Index	333,538,950
Fund of Funds & Co Investments Fund of Funds & Co Investments	507,201,866 26,054,362 25,195,022
	Private Real Estate Global REIT Timber  Enhanced Index  Fund of Funds & Co Investments

# **INVESTMENT MANAGEMENT FEES**

Since management fees directly affect the returns of a manager, a best effort is made to achieve the best fee agreement possible. MERS leverages the scale of investments to negotiate deals that are at the lower end of industry standards and more than competitive with peers. While it is understood that superior managers often have higher fee structures, performance expectations and cost are carefully balanced. Fees are the only factor that one can be certain of ex ante; thus it is critical to minimize them to the extent possible. All else being equal, managers with lower fees will be favored.

Schedule of Investment Fees – as of December 31, 2012

Investment Managers	Average Assets Under Management	Annual Fee	Average Basis Points
Acadian Asset Management	\$163,485,670	\$785,208	48.03
AMBS Investment	29,471,075	58,908	19.99
BlackRock- Core Active Bond	218,816,983	114,037	5.21
BlackRock- Frontier Markets	75,219,510	547,613	72.80
BRC Investment Management	67,329,273	84,211	12.51
Credit Suisse Customized Infrastructure	241,473,129	1,916,856	79.38
Credit Suisse Private Equity Fund	555,402,586	371,155	6.68
C.S. McKee- Small Cap Core	187,410,984	824,622	44.00
C.S. McKee- Fixed Income	294,941,119	445,234	15.10
Downriver Capital Management	26,069,526	78,543	30.13
Driehaus Global Growth	315,575,346	949,748	30.10
EAM	75,945,968	761,392	100.25
First International Advisors	334,381,437	769,190	23.00
Hellman Jordan	35,211,025	156,032	44.31
Hexam	97,006,473	679,097	70.01
Irving Magee	161,451,717	909,888	56.36
Janus- Core Plus	456,880,512	566,348	12.40
Janus- Short Duration	280,377,661	202,675	7.23
Kennedy Capital Management- Micro Cap	76,418,069	691,629	90.51
Kennedy Capital Management- Small Cap Value	191,196,520	797,442	41.71
Mellon Tangent Added TAA	392,806,283	667,517	16.99
Morgan Dempsey	73,729,038	516,684	70.08
Punch Investments	83,219,566	741,659	89.12
Reams Asset Management	134,509,839	154,243	11.47
Seizert Capital	27,587,330	110,349	40.00
Stone Harbor	233,019,214	578,439	24.82
Urdang Investment Management	150,600,712	775,805	51.5 <u>1</u>
Wellington Management	210,089,084	535,182	25.47
Wellington Management- Mid Cap	195,503,975	1,072,694	54.87
The Townsend Group	160,457,344	247,741	15.44
Total Investment Manager Fees	\$5,545,586,968	\$17,110,141	30.85
Investment Custodian State Street Bank and Trust Investment Performance Measurement Consultant		1,055,791	
State Street Bank and Trust Securities Lending Agent		102,000	
State Street Bank and Trust		939,166	
Total Investment Fees		\$19,207,098	

# Schedule of Investment Commissions as of December 31, 2012

Brokerage Firm	Shares Traded	Total Dollars	Commission/Share
Instinet	22,827,339	\$304,524	0.0133
Cantor Fitzgerald & Company	11,610,960	262,998	0.0227
State Street Bank and Trust	20,067,767	204,803	0.0102
Knight Equity Markets, LP	6,398,731	114,939	0.0180
Knight Direct LLC	7,152,110	93,559	0.0131
Merrill Lynch, Pierce, Fenner, and Smith Inc	4,503,149	90,871	0.0202
Bloomberg Tradebook, LLC	7,234,506	89,743	0.0124
JonesTrading Institutional Services, LLC	3,932,811	86,375	0.0220
Weeden & Company	2,922,962	77,084	0.0264
Wm Smith & Company	2,058,797	65,683	0.0319
Capital Institutional Services, Incorporated	2,037,451	65,508	0.0322
State Street Global Markets, LLC	1,504,281	63,666	0.0423
Craig-Hallum Capital Group LLC	2,552,489	58,010	0.0227
Robert W. Baird and Company	1,422,340	48,535	0.0341
Credit Suisse Securities	12,269,957	48,519	0.0040
Raymond James and Associates Incorporated	1,497,128	44,831	0.0299
Morgan Stanley and Company Incorporated	6,284,403	43,680	0.0070
Cowen and Company, LLC	1,364,546	42,058	0.0308
J.P. Morgan Clearing Corporation	1,232,279	35,972	0.0292
Needham & Company	1,291,825	34,529	0.0267
BNY Brokerage	2,445,554	34,205	0.0140
Goldman Sachs & Company	3,779,314	34,083	0.0090
Stifel, Nicolaus, & Company, Incorporated	1,508,693	33,093	0.0219
RBC Capital Markets	1,994,984	32,847	0.0165
Gilford Securities	980,930	32,603	0.0332
Subtotal (25 Largest)	130,875,306	2,042,718	0.0156
Remaining Total	92,426,194	955,221	0.0103
Total Commissions	223,301,500	\$2,997,939	0.0134

# B. MERS INVESTMENT MENU SUMMARY FOR THE DEFINED CONTRIBUTION PLAN, HYBRID (PART II) PLAN, HEALTH CARE SAVINGS PROGRAM, AND 457 PROGRAM

The MERS Retirement Board, together with the Office of Investments, selects the menu of investment options for the MERS Defined Contribution Plan, Hybrid Plan (Part II), Health Care Savings Program, and 457 Supplemental Retirement Program. In addition, the Board establishes and maintains investment guidelines, approves any material changes, and directs staff to help participants with investment education.

The MERS Investment Menu is simplified into four categories or "sleeves" which help streamline the participant's selection process. For performance and fee information of individual funds, please review the *MERS Investment Menu Fund and Fee Summary*, which is updated on a quarterly basis and available on the MERS website at *www.mersofmich.com/investments*. A full description of each investment option can also be found on the MERS website.

# **Retirement Strategies**

Retirement Strategies are also known as Target Date Funds. Each fund is a complete, diversified investment program that changes its asset mix as the participant moves toward and through retirement. Retirement Strategies are the default investment selection for the Defined Contribution Plan, Hybrid Part II, and the 457 Program.

# **Diversified Portfolios**

Diversified Portfolios are professionally managed by MERS, and allow access to certain MERS investments. Each fund is a fully diversified portfolio with a target allocation that is rebalanced quarterly. The Diversified Portfolios include the Established Market Fund, which is the default selection for the MERS Health Care Savings Program.

# **Expanded Funds**

Expanded Funds give experienced investors a variety of available funds from which to choose. Used in conjunction with any of the other sleeves of the MERS Investment Menu or by themselves, these funds are designed to further diversify a participant's investment portfolio.

# Self-Directed Brokerage Window

The Self-Directed Brokerage Window offers access to a broader selection of funds. Several requirements are needed to be eligible as well as a minimum account balance. The Brokerage Window is not available for the MERS Health Care Savings Program.

# C. MERS RETIREE HEALTH FUNDING VEHICLE

The MERS Retirement Board and Office of Investments actively choose and monitor the fund lineup available to employers enrolled in the Retiree Health Funding Vehicle. MERS values a disciplined approach to investing and must also follow Michigan state law and established standards of diligence with strict oversight and management. The funds are professionally managed by a dedicated team of experienced investment professionals and support staff, and are responsible for monitoring all investment activity.

The funds available in the Retiree Health Funding Vehicle are:

- MERS Total Market Fund
- MERS Established Market Fund
- MERS Diversified Bond Fund
- MERS Short-Term Managed Income Fund

# D. MERS INVESTMENT SERVICES PROGRAM

The Investment Services Program provides municipalities with non-membership access to the MERS Total Market Fund. Employers benefit from a professionally managed fund, economies of scale, and lower administrative fees while still maintaining local control of administration.

To view investment activity on the MERS Total Market Fund, see part A of the Investments Section.

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# ACTUARIAL SECTION

# A Tradition of Service

We were created by the Michigan Legislature in 1945 with one simple goal: to help municipalities offer affordable, sustainable retirement solutions for their employees. Our longevity is designed to complement the longevity of our members, and to ensure the financial soundness and well being of our member municipalities.

April 24, 2013

The Retirement Board Municipal Employees' Retirement System of Michigan Lansing, Michigan

### Ladies and Gentlemen:

This report presents a summary of the results of the 66<sup>th</sup> Annual Actuarial Valuations, prepared as of December 31, 2011, for the Municipal Employees' Retirement System (MERS) 721 Defined Benefit Plan and Hybrid Plan municipalities. The report was prepared at the request of the Retirement Board and is intended for use by the Retirement System.

MERS is an independent public nonprofit organization that has partnered with Michigan municipalities for more than 65 years. As an agent multiple-employer plan, MERS establishes a separate trust for each municipality. Each entity is responsible for the employer contributions needed to provide benefits for its employees and former employees under the Michigan Constitution, the MERS Plan Document, and MERS' enabling legislation (Public Act 427 of 1984, as amended). The pension plan is a tax-qualified plan under section 401(a) of the Internal Revenue Code (most recent letter of Favorable Determination issued April 26, 2012).

The purpose of each municipality's December 31, 2011 annual actuarial valuation is to measure funding progress, to determine the employer contribution rates for the fiscal year beginning in 2013, and to determine the actuarial information for the Governmental Accounting Standards Board (GASB) Statement Nos. 25 and 27.

The purpose of this summary report is to provide an overview of the results of the valuations of the individual municipalities. Note that the combined results for all municipalities are not indicative of the financial status of each municipality, since each entity stands on its own financially, with separately computed liabilities and contribution requirements. MERS is not funded on a combined basis. The information in this report should not be used to compare the results between various employers or to compare the results of an employer to the combined results. There are many factors that would make this type of a comparison of minimal value. This report also contains certain information that is required to be included in the MERS Comprehensive Annual Financial Report.

This report should not be relied on for any purpose other than the purpose described in this cover letter.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

The Retirement Board April 24, 2013 Page 2

The signing actuaries are employees of MERS. All of the undersigned actuaries are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. The valuation was based upon information furnished by various MERS departments. We checked for internal and year-to-year consistency, but we did not otherwise audit the data. We are not responsible for the accuracy or completeness of the provided data.

Our actuarial valuation was based on the following:

- 1. The benefit provisions of MERS, as described on pages 3 12 of Appendix D which is on the MERS website at: <a href="https://www.mersofmich.com/Appendix">www.mersofmich.com/Appendix</a>.
- 2. Demographic data on the participants covered, as described in Section II.
- 3. Financial information regarding plan assets, as described in Section III.
- 4. The actuarial assumptions and funding methods adopted by the Retirement Board. See pages 13 28 of Appendix D on the MERS website at: <a href="https://www.mersofmich.com/Appendix">www.mersofmich.com/Appendix</a>.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board and in compliance with Act No. 427 of the Public Acts of 1984, as amended, and the MERS Plan Document as revised. The actuarial assumptions used for this valuation produce results that we believe are reasonable.

Respectfully Submitted,

Alan Sonnanstine, MAAA, ASA

Alan E. Sommanter

Cathy Nagy, MAAA, FSA

Cathy N-gy

Jim Koss, MAAA, ASA

# SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

An actuarial valuation is the mathematical process that estimates plan liabilities and employer contribution requirements for the purpose of financing the Retirement System. This process is repeated annually to update the liabilities and contribution requirements for changes in member census and plan features, and to reflect actual plan experience in the process. The valuation reflects the current language of the Municipal Employees' Retirement Act of 1984, as last amended by Public Act 490 of 2004, embodied in the MERS Plan Document (as revised).

In addition to using current membership and financial data, an actuarial valuation requires the use of a series of assumptions regarding uncertain future events. The assumptions and methods used in the December 31, 2011, actuarial valuations are those adopted by the Retirement Board. The actuarial assumptions were last revised as of December 31, 2011, due to the results of the plan experience study covering the period from December 31, 2003, through December 31, 2008. The most recent experience study for the System was completed in March 2010 and covered the period January 1, 2004, through December 31, 2008.

There have been no changes in the funding method that was adopted by the Retirement Board commencing with the December 31, 1993, valuations. The basic funding method is entry age normal, and employer contribution amounts are developed as a level percentage of payroll.

Valuation assets (cash and investments) were valued for each municipality using a 10-year smoothing method. For the 2006 valuation and later, the excess (shortfall) of actual investment income (including interest, dividends, realized and unrealized gains or losses) over the imputed income at the valuation interest rate, is considered the gain (loss) that is spread over 10 years. (Board adopted in 2006.)

The employer contribution rate has been determined for each municipality based on the entry age normal funding method (Adopted 1994). Under the entry age normal cost funding method, the total employer contribution is comprised of the normal cost plus the level annual percentage of payroll payment required to amortize the unfunded actuarial accrued liability over a period of 27 years. The 27-year period will decline by one year in each of the following seven annual valuations until it reaches 20 years with the December 31, 2017 valuation. For closed divisions (new hires are not covered by MERS defined benefit plan or hybrid provisions in a linked division) of active municipalities, the amortization period for positive unfunded liabilities is decreased annually by two years until the period reaches five years. Negative unfunded accrued liabilities are amortized over 10 years. The total normal cost is, for each active member, the level percentage of payroll contribution (from entry age to retirement) required to accumulate sufficient assets at the member's retirement to pay for his or her projected benefit. The employer normal cost is the total normal cost reduced by the member contribution rate. Closed municipalities (no longer actively participating in MERS) are covered by special funding.

For employers that adopt E-1 or E-2 post-retirement benefit increases, retirement benefits are assumed to increase by an annual, non-compounded rate of 2.5%. (Board adopted in 1981.)

There have been no recent changes that have had an impact on the System. Municipalities have the ability to modify provisions that apply to their individual plan. The individual municipality contribution rates are modified to account for changes in provisions of the plan selected by the municipality.

MERS staff has furnished the data about persons currently covered and present assets. Although examined for general reasonableness,

the actuary has not audited the data. The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (MAAA). MERS' actuarial staff members are employees of MERS. The Retirement Board adopted the assumptions used in the actuarial valuations after consulting with the actuary.

Details on MERS provisions, actuarial assumptions, and actuarial methodology follow this section.

Note: the Annual Actuarial Valuation addresses assets and liabilities for participation under MERS Defined Benefit Plan, including the defined benefit portion (Part I) of the Hybrid Plan. The defined contribution portion of the Hybrid Plan (Part II), Is not addressed in the valuation results as it is not a defined benefit program.

# **ASSUMPTIONS AND METHOD CHANGES**

The December 31, 2011, actuarial valuation reflects the following changes in the actuarial assumptions:

- Revised rates of expected early reduced retirement
- Revised rates of disability
- Revised rates of expected employee turnover (withdrawal, or termination of employment before retirement)
- Revised rates of merit/longevity pay increases
- Revised assumptions related to Increases In final average compensation for some municipalities
- New minimum funding requirements for lower funded, closed divisions

# **Actuarial Assumptions**

To calculate MERS contribution requirements, assumptions are made about future events that could affect the amount and timing of benefits to be paid, and the assets to be accumulated. The economic and demographic assumptions include:

- An assumed rate of investment return used to discount liabilities and project what plan assets will earn
- A mortality table projecting the number of members who will die before retirement, and the duration of benefit payments after retirement

- Assumed retirement rates projecting when members will retire and commence receiving retirement benefits
- A set of withdrawal and disability rates to estimate the number of members who will leave the workforce before retirement
- Assumed rate of pay increases to project member compensation in future years

### Interest Rate

Funding plan benefits involves the accumulation of assets to pay benefits in the future. These assets are invested, and the net rate of investment earnings is a significant factor when determining the contributions required to support the ultimate cost of benefits. For the 2011 actuarial valuation, the net long-term investment yield is assumed to be 8%. This assumption was first used for the December 31, 1981, actuarial valuation.

The reader should note that, given that the actuarial value of assets is currently 21% higher than the market value, meeting the actuarial assumption in the next few years will require average annual market returns that substantially exceed the 8% investment return assumption.

# Pay Increase

Because benefits are based on a member's final average compensation, it is necessary to make an assumption with respect to each member's estimated pay progression. The pay increase assumption used in the actuarial valuation projects annual pay increases of 4.5% (1% for calendar years 2012-2014), plus a percentage based on an age-related scale to reflect merit, longevity and promotional pay increases.

The pay increase assumption for sample ages is shown below. The 4.5% wage inflation assumption was first used for the December 31, 1997, actuarial valuation. The merit and longevity pay increase assumption was first used for the December 31, 2011, actuarial valuation.

# Annual Percentage Increase in Salary

Sample Ages	Base Inflation	Merit and Longevity	Total Percentage Increase in Salary
20	4.50%	13.00%	17.50%
25	4.50	6.80	11.30
30	4.50	3.26	7.76
35	4.50	2.05	6.55
40	4.50	1.30	5.80
45	4.50	0.81	5.31
50	4.50	0.52	5.02
55	4.50	0.30	4.80
60	4.50	0.00	4.50

\*For calendar years 2011, 2012, 2013, and 2014, the wage inflation assumption is 1%, instead of 4.5%. This assumption was first used for the December 31, 2010, actuarial valuations.

# Inflation

Although no specific price inflation assumption is needed for this valuation, the 4.5% long-term wage inflation assumption would be consistent with a price inflation of 3-4%.

# Payroll Growth

For divisions that are open to new hires, the number of active members is projected to remain constant, and the total payroll is projected to increase 4.5% annually in the long term (1% annually for calendar years 2012 -2014). This assumption was first used for the December 31, 1997, actuarial valuations.

# Increase in Final Average Compensation

The 1999-2003 and 2004-2008 experience studies determined that for some retirees of some municipalities, the actual final average compensation (FAC) at retirement was larger than would be expected based on reported annual pays and FACs for the years just before retirement. Some possible sources for the differences are:

- Lump sum payments for unused paid time
  off. Unused sick leave payouts have been
  excluded from FAC since the mid 1970s.
  However, since that time it has become
  popular to combine sick and vacation time
  into paid time off, which is included in the
  FAC. Consequently, the lump sums that are
  includible in FAC have grown over the years.
- Extra overtime pay during the final year of employment. Our studies only reflect any increase in overtime during the final year, not any increase that occurs during the full three to five year averaging period.

The amount of unexpected FAC increase varies quite a bit between municipalities. Some municipalities show no sign of FAC loading, while other municipalities show increases above the average increase. This is presumably the result of different personnel policies among municipalities.

The Retirement Board adopted new FAC assumptions to be first used for the December 31, 2011, annual actuarial valuations. These assumptions reflect an FAC load of 0-8% for each municipality, based on the municipality's experience. The FAC increase assumption(s) for each municipality are shown in individual annual actuarial valuation reports. Note that for divisions that adopted SLIF (Sick Leave in FAC), the assumption is developed individually for each division, based on the specific SLIF provision and/or past experience.

### Withdrawal Rates

The withdrawal rates are used to estimate the number of employees at each age that are expected to terminate employment before qualifying for retirement benefits. The withdrawal rates do not apply to members eligible to retire, and do not include separation on account of death or disability. The assumed rates of withdrawal applied in the current valuation are based on years of service and scaled up or down according to each division's experience.

The base withdrawal rates are multiplied by a scaling factor to obtain the assumed withdrawal rates. The scaling factor is reported in each municipality's annual actuarial report. Sample rates of withdrawal from active employment, prior to the scaling factor, are shown below. These rates were first used for the December 31, 2008, actuarial valuations.

Rates of Withdrawal (Excluding Death or Disability) from Active Employment Before Retirement

Sample Years of Service	% of Active Members Withdrawing Within the Next Year
0	20.0%
2	<u>17.0</u> 14.0
3	11.0
4	9.0
5	6.5
10	5.0
15	3.7
20	3.0
25	2.7
30	2.6
34 and Over	2.4

# **Retirement Rates**

A schedule of retirement rates is used to measure the probability of eligible members retiring during the next year. The rates for normal retirement are determined by each member's replacement index at the time of retirement. The replacement index is defined as the approximate percentage of the member's pay (after reducing member contributions) that will be replaced by the member's benefit at retirement. The index is calculated as:

of Eligible pers Retiring ext Year Replacement Index = 100 multiplied by Accrued Benefit ÷ by [Pay - Member Contributions].

Retirement rates for early reduced retirement are determined by the member's age at early retirement.

The revised normal retirement rates below were first used for the December 31, 2009, actuarial valuations. The early retirement rates were first used for the December 31, 2011, actuarial valuations.

Normal Retirement - Service Based Benefit F(N) Adopted

Sample Replacement Index	Percent of Active Membrane Within N
5	5%
10	11
<u>15</u>	16
20	19
25	20
30	20
35	20
40	20
45	20
50	20
55	21
60	22
65	24
70	24
75	28
80	32
85	38
90	45
95	48
<u>100+</u>	50

Early Retirement - Reduced Benefit

Retirement Ages	Percent of Eligible Active Members Retiring Within Next Year
50	1.60%
51	1.60
52	2.30
<u>53</u>	3.30
54	4.50
<u>55</u>	3.50
56	3.25
57	3.00
58	4.50
59	5.75

Municipalities that have adopted a non-standard benefit multiplier after December 31, 1996 that is in excess of the B-4, 2.5% multiplier, will have a retirement rate equal to 75% at the first age at which unreduced plan benefits are available.

# **Disability Rates**

Disability rates are used in the valuation to estimate the incidence of member disability in future years. The assumed rates of disablement at various ages are shown below. These rates were first used for the December 31, 2011, actuarial valuations.

Rates of Withdrawal Due To Disability\*
Percent Becoming Disabled Within Next Year

Sample Years of Service	Percent of Active Members Becoming Disabled Within Next Year
<u>20</u>	0.02%
25	0.02
30	0.02
35	0.06
40	0.06
45	0.11
50	0.24
<u>55</u>	0.60
60	0.60
65	0.60

<sup>\* 85%</sup> of the disabilities are assumed to be non-duty, and 15% of the disabilities are assumed to be duty related. For those plans that have adopted disability provision D-2, 70% of the disabilities are assumed to be non-duty, and 30% are assumed to be duty related.

# **Mortality Tables**

In estimating the amount of reserves required at retirement to pay a member's benefit for the remainder of their lifetime, it is necessary to make an assumption with respect to the probability of surviving to retirement, and the life expectancy after retirement.

The mortality table used to project the mortality experience of plan members is a 50% male -50% female blend of the 1994 Group Annuity

Mortality table. For disabled retirees, the regular mortality table is used with a 10-year set forward in ages to reflect the higher expected mortality rates of disabled members. These mortality tables were first used for the December 31, 2004, actuarial valuations.

It is assumed that 90% of active members deaths are non-duty, and 10% of deaths are assumed to be duty related.

# Mortality Tables (Non – Disabled)

Age	Expected Years of Life Remaining	Mortality Rates
20	61.55	0.04%
25	56.68	0.05
30	51.82	0.06
35	46.97	0.07
40	42.13	0.09
45	37.34	0.13
<u>50</u>	32.60	0.20
<u>55</u>	27.98	0.34
<u>60</u>	23.53	0.62
<u>65</u>	19.40	1.16
70	15.66	1.87
75	12.24	2.99
80	9.25	5.07

# Mortality Tables (Disabled)

Age	Expected Years of Life Remaining	Mortality Rates
20	51.82	0.06%
25	46.97	0.07
30	42.13	0.09
<u>35</u>	37.34	0.13
40	32.60	0.20
<u>45</u>	27.98	0.34
50	23.53	0.62
55	19.40	1.16
60	15.66	1.87
65	12.24	2.99
70	9.25	5.07
75	6.81	8.25
80	4.85	13.46

# Schedule of Active Member Valuation Data

Valuation Dec. 31	Participating Municipalities	Active Members	Active Members Annual Payroll	Annual Average Pay	Percent Increase in Average Pay	Persons on Deferred Status
2002	575	37,043	\$1,327,360,448	\$35,833	3.1%	5,51 <u>0</u>
2003	594	37,159	1,381,197,725	37,170	3.7	5,575
2004	615	36,766	1,437,211,517	39,091	5.2	5,804
2005	644	36,467	1,462,411,810	40,102	2.6	6,126
2006	668	36,846	1,545,886,480	41,955	4.6	6,235
2007	683	36,518	1,581,597,937	43,310	3.2	6,438
2008	692	36,092	1,624,855,145	45,020	3.9	6,662
2009	699	35,598	1,636,501,282	45,972	2.1	6,726
2010	715	35,816	1,683,983,258	47,018	2.3	6,961
2011	721	35,111	1,669,676,476	47,554	1.1	7,160

# Schedule of Retirees and Beneficiaries Added to and Removed from Rolls

	Added to Rolls		Removed From Rolls	
Valuation Dec. 31	Retirees/ Beneficiaries Number	Annual Allowance	Retirees/ Beneficiaries Number	Annual Allowance
2002	1,275	\$25,079,342	642	\$5,882,066
2003	1,577	31,229,077	672	5,623,367
2004	1,553	32,303,049	725	6,669,694
2005	1,666	32,839,907	782	7,000,257
2006	2,071	38,752,141	762	4,291,133
2007	2,030	36,947,384	894	5,928,199
2008	2,015	43,573,642	783	5,156,426
2009	1,871	36,164,024	773	4,545,379
2010	2,809	67,149,443	809	9,250,641
2011	2,212	50,594,419	940	11,072,125

	End-of-Year Rolls							
Valuation Dec. 31	Retirees/ Beneficiaries Number	Annual Allowance	% Increase in Annual Allowance	Average Annual Allowance				
2002	17,538	\$210,982,922	10.0%	\$12,030				
2003	18,443	236,588,632	12.1	12,828				
2004	19,271	262,221,987	10.8	13,607				
2005	20,155	288,061,637	9.9	14,292				
<u>2006</u>	21,464	322,522,645	12.0	15,026				
2007	22,600	353,541,830	9.6	15,643				
2008	23,832	391,959,046	10.9	16,447				
2009	24,930	423,577,691	8.1	16,991				
2010	26,930	481,476,493	13.7	17,879				
2011	28,202	520,998,787	8.2	18,474				

# Solvency Test

The Solvency Test is another means of checking the Retirement System's progress under the funding program, based on the aggregate accrued liability. In this test, the Plan's present assets (actuarial value) are compared with obligations in order of priority: (1) active member contributions on deposit; (2) the present value of future benefits to present retired lives; (3) the aggregate accrued liability for present active members.

In a System that has been following the discipline of level percent of payroll financing, the obligation for active member contributions on deposit (present value 1) and the present value of future benefits to present retired lives (present value 2) will be fully covered by present

assets (except in rare circumstances). In addition, the aggregate accrued liability for present active members (present value 3) will be partially covered by the remainder of present assets. Generally, if a retirement system has been using level cost financing, in the absence of benefit provision increases, the funded portion (of present value 3) will increase over time.

The Solvency Test illustrates the history of the obligation and reflects the MERS policy of following the discipline of level percent payroll financing. The solvency of the System remains sound. However, many municipalities have adopted richer benefits in recent years that have dampened the funding level. The System as a whole remains on track for meeting its obligations.

# Solvency Test – (Dollars In Millions)

	Aggregate Accrued Liabilities					Portion of Accrued Liabilities Covered by Valuation Assets			
Valuation Date Dec. 31	(1) Active Member Contributions	(2) Retirees and Beneficiaries	(3) Active Members (Employer Financed Portion)	(4) Total Aggregate Accrued Liabilities	Valuation Assets	(1)	(2)	(3)	(4)
2002	\$359.2	\$2,159.1	\$2,662.8	\$5,181.1	\$4,133.0	100%	100%	60.6%	79.8%
2003	396.7	2,435.2	2,835.8	5,667.7	4,459.5	100	100	57.4	78.7
2004	422.5	2,696.6	3,045.7	6,164.8	4,732.2	100	100	53.0	76.7
2005	463.0	2,966.2	3,179.9	6,609.1	5,026.1	100	100	50.2	76.0
2006	518.0	3,314.5	3,355.2	7,187.7	5,493.8	100	100	49.5	76.4
2007	565.9	3,627.6	3,530.4	7,723.9	5,973.0	100	100	50.4	77.3
2008	591.9	4,029.2	3,700.7	8,321.8	6,245.5	100	100	43.9	75.0
2009	604.2	4,342.0	3,588.5	8,534.7	6,443.1	100	100	41.7	75. <u>5</u>
2010	652.1	4,950.7	3,714.4	9,317.2	6,945.4	100	100	36.1	74.5
2011	658.6	5,345.8	3,840.0	9,844.4	7,150.5	100	100	29.8	72.6

# SUMMARY OF PLAN DOCUMENT PROVISIONS

There were no recent changes in the nature of the Plan that would have a material impact on the actuarial valuations for December 31, 2011. Pursuant to a collective bargaining agreement, a participating municipality may provide for retirement benefits that are modifications of standard retirement benefits otherwise included, although the Hybrid Plan is not modifiable. The actuary took the known modifications into consideration when determining the municipality contribution rates in the December 31, 2011, actuarial valuation.

The benefits summarized in this section are intended only as general information regarding the Municipal Employees' Retirement System. The Comprehensive Annual Financial Report and valuation are not a substitute for the language of the MERS Act and the MERS Plan Document, as revised. If any conflict occurs between the information in this summary and the MERS Act or the MERS Plan Document, as revised, the provision of the Act and the MERS Plan Document govern.

The December 31, 2011, actuarial valuation was based on the provisions of the MERS Plan Document.

# **Defined Benefit Plan**

# **Eligibility for Retirement**

Monthly retirement payments are made over the lifetime of the retiree and/or over the lifetime of the beneficiary. Payments are based on the choice of benefits adopted by each municipality, and the final payment option elected by the retiring member.

Vesting occurs after 10 years of credited service unless the municipality selects a lesser number of years.

Normal retirement for a member occurs after vesting and attaining age 60. The municipality may choose other combinations of age and service such as age 55 and 15 years of service, age 50 and 25 years of service, etc.

Early retirement benefits are available if the vested member meets either the age 55 with 15 years of service or age 50 with 25 years of

service eligibility requirements. The monthly payment is reduced (unless waived by the municipality) for each month the member is younger than the age the unreduced retirement benefits are available.

# Benefit Formula

The annual benefit equals a specified percentage of the member's final average compensation, multiplied by the number of years and months of credited service. The plan has several benefit multipliers available. The benefit multipliers vary and are adopted by a participating municipality.

### **Mandatory Retirement**

There is no mandatory retirement age.

### **Deferred Retirement**

Deferred retirement occurs when an employee leaves MERS covered employment after vesting, but before reaching the minimum retirement age. The member or beneficiary will become eligible for the deferred allowance once they reach the minimum retirement age. However, the member's contributions must remain on deposit with MERS.

# Maximum Benefit Payable by MERS

The maximum benefit that may be paid by MERS is governed by Section 415 of the Internal Revenue Code. Benefits in excess of the maximum benefit will be paid by the MERS Excess Benefit Plan under Plan Section 55A.

# Act 88 (Reciprocal Retirement Act)

If a municipality elects to come under the provision of Act 88, service with former and future public employers in Michigan may be used to satisfy the service eligibility conditions of MERS.

# **Final Average Compensation**

Final average compensation (FAC) is the highest monthly average of a member's compensation over a consecutive period of months of credited service. The municipality selects the number of months. A FAC-3 is over a 36-month period, a FAC-5 is over a 60-month period. The compensation used in calculating the final average compensation cannot exceed the limit set by Internal Revenue Code Section 401(a)(17).

# Disability Retirement Allowance – Duty or Non-Duty

Duty disability is available to a member who becomes totally and permanently disabled while employed by a participating municipality, and after meeting the vesting requirement of the benefit program. The service requirement is waived if the disability is the natural and proximate result of duty-related causes.

The allowance is computed in the same manner as a service retirement allowance, except that the reduction for retirement before age 60 is not applied.

If disability is due to duty-connected causes, the amount of the retirement allowance shall not be

less than 25% of the member's final average compensation.

# Death Allowance - Duty or Non-Duty

If a member or vested former member with the minimum years of service required to be vested dies before retirement, a monthly survivor allowance may be made payable.

If the member is married, the spouse is the automatic beneficiary unless the spouse, in writing, declines a benefit in favor of another named beneficiary.

A contingent survivor beneficiary will receive a retirement allowance computed in the same manner as a service retirement allowance, based on service and final average compensation at death, but reduced to reflect an Option II election. The reduction for retirement before age 60 is not applied. Payment to the contingent survivor beneficiary of a deceased member commences immediately. Payment to the contingent survivor beneficiary of a deceased vested former member commences on the date the member would have first satisfied eligibility for retirement with an unreduced service retirement allowance.

If there is no named beneficiary and the member leaves a spouse, the spouse will receive an Option II survivor allowance. The amount shall be 85% of the deceased member's or the deceased former vested member's accrued retirement allowance computed in the same manner as a service retirement allowance, based on service and final average compensation at the time of death. Payment to the surviving spouse of a deceased member commences immediately. Payment to the contingent surviving spouse of a deceased former vested member commences on the date the member would have first satisfied eligibility for retirement with an unreduced service retirement allowance. The amount of a surviving spouse's benefit is always the larger of (1): the benefit computed as a contingent survivor beneficiary, and (2) the 85% of accrued retirement allowance benefit described above.

If there is no named beneficiary and no retirement allowance being paid to a surviving spouse, unmarried children under 21 will be paid an equal share of 50% of the deceased member's or the deceased former vested member's accrued retirement allowance. The reduction for retirement before age 60 is not applied.

If no retirement benefits are payable on death, the beneficiary or the decedent's estate would receive a refund of the employee's contributions.

A duty death allowance, computed in the same manner as a non-duty death allowance, may be payable to a spouse or child(ren) if death occurs as the natural and proximate result of performance of duty with a participating municipality. The vesting requirement is waived, and the minimum benefit is 25% of the deceased member's final average compensation.

### **Member Contributions**

Each member may contribute a percentage of their annual compensation, if selected by the municipality, up to the compensation limit under Section 401(a)(17) of the Internal Revenue Code. Interest is credited to accumulated member contributions each December 31 at a rate determined by MERS. Currently MERS is using the one-year U.S. Treasury bill rate determined as of December 31.

If a member leaves the municipality, or dies without a retirement allowance or other benefit payable on their account, the member's accumulated contributions plus interest are refunded with spousal consent to the member, if living, or to the member's surviving spouse or a named beneficiary.

# Post-Retirement Adjustments

Each municipality may elect to provide post-retirement adjustments to retirees and their beneficiaries. The municipality can choose a one-time adjustment, an annual adjustment for all retirees or, an adjustment for future retirees only. This cost-of-living adjustment (COLA)-type of increase is effective in January of each year.

# Forms of Benefit Payment

The member elects a payment option as part of the retirement application process. Once the election is made, the selection is irrevocable after receipt of first payment. The payment options include:

- 1. Straight Life over the retiree's life only.
- 2. A reduced benefit to cover retiree and beneficiary as long as either lives.
- 3. A reduced benefit to cover retiree for their lifetime and further reduced to 75% or 50% of the original reduced amount to cover beneficiary (if the beneficiary outlives the retiree).
- 4. A reduced benefit for the retiree's life guaranteed for a specified number of years. The reduced benefit continues for the beneficiary even if the retiree dies, but terminates after the guaranteed number of years.

### DROP+: Delayed Retirement Option Partial Lump Sum

Any member (covered or not covered by the Benefit Program DROP+) who is eligible to retire with full, immediate retirement benefits, has the option to retire and receive a monthly benefit payable immediately, or delay the retirement date and continue to work.

If a member is covered by the Benefit Program DROP+ and retires at least 12 months after first becoming eligible for unreduced benefits, they have the option to receive a partial lump sum and a reduced monthly benefit:

- The member can elect a lump sum equal to 12, 24, 36, 48, or 60 times their monthly accrued benefit.
- For each 12 months included in the lump sum, the member's lifetime benefit is reduced by the DROP+ percentage adopted by the employer. The employer can adopt any of the following DROP+ reduction percentages: 4, 5, 6, 7, or 8%.

Benefit Program DROP+ may not be adopted after June 30, 2013.

# Hybrid Plan

# Part I - Defined Benefit Portion of Hybrid Plan

# **Eligibility for Retirement**

Monthly retirement payments are made over the lifetime of the retiree and/or over the lifetime of the beneficiary. Payments are based on the choice of benefits adopted by each municipality, and the final payment option elected by the retiring member.

Vesting occurs after six years of credited service.

Normal retirement for a member occurs after vesting and reaching age 60. (There is not a mandatory or early retirement provision.)

# Benefit Formula

The annual benefit equals a specified percentage of the member's final average compensation multiplied by the number of years and months of credited service. Percentage options are 1, 1.25, and 1.5%, and may be selected by a participating municipality.

# **Mandatory Retirement**

There is no mandatory retirement age.

# **Deferred Retirement**

Deferred retirement occurs when an employee leaves MERS covered employment after vesting, but before reaching the minimum retirement age. The member or beneficiary will become eligible for the deferred allowance once they reach the minimum retirement age. However, the member's contributions must remain on deposit with MERS.

# Maximum Benefit Payable by MERS

Section 415 of the Internal Revenue Code governs the maximum benefit that may be paid by MERS. Benefits in excess of the maximum benefit will be paid by the MERS Excess Benefit Plan.

# Act 88 (Reciprocal Retirement Act)

If the municipality has elected to come under the provision of Act 88, service with former and future public employers in Michigan may be used to satisfy the service eligibility conditions of MERS.

# Final Average Compensation

Final average compensation (FAC) is computed using the FAC-3 under the Defined Benefit Plan. The compensation used in calculating final average compensation cannot exceed the limit set by Internal Revenue Code Section 401(a)(17).

# Disability Benefit – Duty or Non-Duty

Benefits are the same as are provided in the Defined Benefit Plan, except that optional benefit program D-2 does not apply.

# Death Allowance - Duty or Non-Duty

Benefits are the same as are provided in the Defined Benefit Plan, except that the optional benefit program D-2 does not apply.

# **Member Contributions**

There are no member contributions.

### Post-Retirement Adjustments

There are no post-retirement adjustments within the Hybrid Plan.

# Forms of Benefit Payment

The member elects a payment option as part of the retirement application process. Once the election is made, the selection is irrevocable after receipt of the first payment. The payment options include:

- 1. Straight Life over the retiree's life only.
- 2. A reduced benefit to cover retiree and beneficiary as long as either lives.
- 3. A reduced benefit to cover retiree for their lifetime, and further reduced to 75% or 50% of the original reduced amount to cover beneficiary (if the beneficiary outlives the retiree).
- 4. A reduced benefit for the retiree's life guaranteed for a specified number of years. The reduced benefit continues for the beneficiary even if the retiree dies, but terminates after the guaranteed number of years.

### DROP+ Delayed Retirement Option Partial Lump Sum

There is no DROP+ option in the Hybrid Plan.

# Part II - Defined Contribution Portion of Hybrid Plan

### Contributions — Employer

Any percentage of compensation is allowed by federal law.

There are three optional vesting schedules for an employer to adopt:

- Immediate vesting upon participation
- 100% vesting after stated years (the maximum vesting period is five years), or
- Graded vesting percentages per year of service (must be 100% vested after six years)

### Contributions — Member

Any percentage of compensation is allowed by federal law and subject to procedures established by the Retirement Board. Member contributions are vested immediately.

# STATISTICAL SECTION

# Strength — in Our Numbers

We are committed to providing quality employee benefit services to our members. Today, we proudly count nearly 800 municipal members and 100,000 participants, many of them your friends and family, your neighbors, coworkers or constituents.

# **MEET THE AVERAGE MERS MEMBER**

As we continually look for ways to improve our service to our members, it's important to have a clear understanding of the people behind the pension. Here's a closer look at our average active member, as of Nov. 11, 2012.



# The Breakdown



Average Account Balance of an active DC Member

\$38,299.14

Changes in Plan Net Position – Last 10 Years Ended December 31, 2012 (Dollars in Thousands)

	2003	2004	2005	2006
Defined Benefit Plan				
Additions:				
Plan Member Contributions	\$62,421	\$55,409	\$71,325	\$84,124
Employer Contributions	161,029	167,943	207,124	286,228
Net Investment Gain (Loss)	800,189	587,519	299,780	634,950
Total Additions to Plan Net Position	1,023,639	810,871	578,229	1,005,302
Deductions:				
Benefits and Employee Refunds	228,520	253,028	278,327	309,63
Administrative Expenses	8,049	9,957	11,557	12,54
Special Expenses & Fees	378	387	399	52
Total Deductions from Plan Net Position	236,947	263,372	290,283	322,70
Net Increase (Decrease) Net Position	786,692	547,499	287,946	682,60
Balance Beginning of Fiscal Period	3,285,305	4,071,997	4,619,496	4,907,44
Balance End of Fiscal Period	\$4,071,997	\$4,619,496	\$4,907,442	\$5,590,04
	Ψ1,071,007	ψ1,010,100	ψ1,007,11Z	φο,οσο,ο
Defined Contribution				
Additions:			4	
Plan Member Contributions	\$3,949	\$4,303	\$4,733	\$5,63
Employer Contributions  Not Investment Coin (Leas)	15,292	18,342	16,351	24,76
Net Investment Gain (Loss)	17,570	10,410	8,427	19,19
Total Additions to Plan Net Position	36,811	33,055	29,511	49,59
<b>Deductions:</b> Benefits	4,090	6,453	9.482	10,59
Administrative Expenses	4,030	0,400	3,402	10,00
Total Deductions from Plan Net Position	4,090	6,453	9,482	10,59
Net Increase (Decrease)	32,721	26,602	· ·	39,00
Net Position	32,721	20,002	20,029	39,00
Balance Beginning of Fiscal Period	84.761	117,482	144,084	164,11
Balance End of Fiscal Period	\$117,482	\$144,084	\$164,113	\$203,11
Haalib Cara Caringa Drawaga				
Health Care Savings Program				
Additions: Employer Contributions	\$-	\$1,389	\$2.872	\$2,30
Net Investment Gain (Loss)	Φ-	130	165	φ <u>2,30</u> 75
Miscellaneous Income	-	-	8	9
Total Additions to Plan Net Position		1,519	3,045	3,14
Deductions:				
Medical Disbursements Paid	-	12	52	14
Forfeitures and transfers	-	-		10
Administrative Expenses	-	184	250	19
Total Deductions from Plan Net Position		196	302	44
Net Increase (Decrease)	-	1,323	2,743	2,70
Net Position  Balance Beginning of Fiscal Period	_	_	1,323	4,06
Balance End of Fiscal Period	<b>\$-</b>	\$1,323	\$ <b>4,066</b>	\$6,76
20.00100 E110 07 1 10000 1 01100	Ψ	Ψ1,020	Ψ1,000	ψ0,70

2007	2008	2009	2010	2011	2012
2007	2000	2003	2010	2011	2012
\$61.772	\$64,871	\$62,677	\$83,573	\$64,790	\$73,133
320,204	310,717	350,737	341,354	298,328	783,292
456,280	(1,533,327)	789,800	754,011	130,115	668,303
838,256	(1,157,739)	1,203,214	1,178,938	493,233	1,524,728
347,470	379,401	419,576	461,204	505,854	565,695
13,904 588	16,365 571	18,793 461	20,951 389	22,070 444	<u>24,412</u> 71
361,962	396,337	438,830	482,544	528,368	590,178
476,294	(1,554,076)	764,384	696,394	(35,135)	934,550
470,204	(1,001,010)	701,001	000,004	(00,100)	301,000
5,590,043	6,066,337	4,512,261	5,276,645	5,973,039	5,937,904
\$6,066,337	\$4,512,261	\$5,276,645	\$5,973,039	\$5,937,904	\$6,872,454
\$6,995	\$6,978	\$8,086	\$8,694	\$10,376	\$17,169
19,816 13,411	20,147 (61,679)	21,994 39,951	26,374 28,971	22,079 1,862	24,931 38,552
40,222	(34,554)	70,031	64,039	34,317	80,652
70,222	(57,557)	70,031	0-,005	34,317	00,032
12,764	12,406	8,868	10,902	19,901	18,532
				826	759
12,764	12,406	8,868	10,902	20,727	19,291
27,458	(46,960)	61,163	53,137	13,590	61,361
202 115	220 E72	100 610	244,776	207.012	211 502
203,115 <b>\$230,573</b>	230,573 <b>\$183,613</b>	183,613 <b>\$244,776</b>	\$297,913	297,913 <b>\$311,503</b>	311,503 <b>\$372,864</b>
Ψ200,010	Ψ100,010	ΨΣ-1-1,770	Ψ207,010	φοτι,σσσ	Ψ01 Z,00 T
\$2,927	\$10,127	\$16,964	\$11,651	\$7,307	\$10,742
719 96	(4,604) 162	2,978 263	4,055 377	918	<u>5,406</u>
3,742	5,685	20,205	16,083	8,225	16,148
	.,	., .,			
328	462	512	890	1,474	1,787
118	212	322	458	16	300
690	360 1,034	159 993	(439)	717 2,207	144 2,231
3,052	4,651	19,212	15,174	6,018	13,917
0,002	1,001				
6,766	9,818	14,469	33,681	48,855	54,873
\$9,818	\$14,469	\$33,681	\$48,855	\$54,873	\$68,790

Changes in Plan Net Position – Last 10 Years Ended December 31, 2012 (Dollars in Thousands)

		,	,	
	2003	2004	2005	2006
Retiree Health Funding Vehicle				
Additions:				
Employer Contributions	\$-	\$1,313	\$11,948	\$29,36
Net Investment Gain (Loss) Total Additions to Plan Net Position	-	109 1,422	448 12,396	4,46
Deductions:		.,	1_,000	
Disbursements Paid to Municipalities	-	-	96	1,1(
Transfers and Special Expenses	-	-		3
Administrative Expenses	-	3	26	13
Total Deductions from Plan Net Position	-	3	122	1,33
Net Increase (Decrease)	-	1,419	12,274	32,49
Net Position  Balance Beginning of Fiscal Period	_	_	1.419	13,69
Balance End of Fiscal Period	\$-	\$1,419	\$13,693	\$46,18
Investment Services Program				
Additions:				
Employer Contributions	\$ -	\$-	\$-	\$15,52
Net Investment Gain (Loss)	-	-	-	7:
Total Additions to Plan Net Position	-	-	-	16,25
Deductions:				
Disbursements Paid to Municipalities	-	-	-	
Administrative Expenses	-	-	-	
Total Deductions from Plan Net Position	-	-	-	40.00
Net Increase (Decrease) Net Position	-	-	-	16,2
Balance Beginning of Fiscal Period	-	-	-	
Balance End of Fiscal Period	\$-	\$-	\$-	\$16,23
457 Program				
Additions:				
Employee Contributions	\$-	\$-	\$-	
Net Investment Gain (Loss)	-	-	-	
Total Additions to Plan Net Position		-	-	
Deductions:				
Benefits	-	-	-	
Administrative Expenses	-	-	-	
Total Deductions from Plan Net Position	-	-	-	
Not Incusors (Decrees)		_	-	
Net Increase (Decrease)	-			
Net Position  Balance Beginning of Fiscal Period	-	-	-	

The Changes in Plan Net Position over the last ten years shows contributions being received from municipalities, investment gains/losses and disbursements to retirees/municipalities. Some products have been in existence for less than 10 years.

2007	2008	2009	2010	2011	2012
\$67,014	\$42,377	\$48,029	\$52,613	\$48,644	\$78,809
6,486	(32,642)	23,525	29,278	6,820	36,770
73,500	9,735	71,554	81,891	55,464	115,579
5,827	3,857	6,088	5,564	9,074	13,071
332	487	623	859	-	
185	319	54	1,039	1,647	521
6,344	4,663	6,765	7,462	10,721	13,592
67,156	5,072	64,789	74,429	44,743	101,987
46,187	113,343	118,415	183,204	257,633	302,376
\$113,343	\$118,415	\$183,204	\$257,633	\$302,376	\$404,363
\$26,680	\$2,969	\$999	\$ -	\$ -	\$700
2,177	(11,607)	3,376	867	162	791
28,857	(8,638)	4,375	867	162	1,491
	(=,===,				
-	750	33,593	-	-	106
238	154	4	250	28	11
238	904	33,597	250	28	117
28,619	(9,542)	(29,222)	617	134	1,374
16,236	44,855	35,313	6,091	6,708	6,842
\$44,855	\$35,313	<b>\$6,091</b>	\$6,708	\$6,842	\$8,216
	. ,	. ,			
\$-	\$-	\$-	\$-	\$-	Φ0 17 <b>0</b>
Φ-	Ψ-	φ-	φ-	φ-	\$8,170 163
	-	_			8,333
-	-	-	-	-	21
-	-	-	-	-	6
	-	•	•	-	27
-	-	-	-	-	8,306
-	-	-	-	-	
\$-	\$-	\$-	\$-	\$-	\$8,306

Schedule of Changes in Reserves – Fiscal Year Ended December 31, 2012 (Dollars in Thousands)

	Reserve for Employee Contributions	Reserve for Employer Contributions and Benefit Payments	Reserve for Expenses and Undistributed Investment Income	Total Reserve for Defined Benefit Plan
Additions				
Member Contributions	\$73.133			\$73.133
Employer Contributions	, 2,	\$783,292		783,292
Net Investment Income			\$668,792	668,792
Miscellaneous Income			95	95
Total Additions	73,133	783,292	668,887	1,525,312
Deductions				
Benefits and Refunds	7,884	557,351		565,235
Transfers and Forfeitures	168	292		460
Administrative Expense			24,412	24,412
Special Expenses and Fees		71		71
Total Deductions	8,052	557,714	24,412	590,178
Net Increase (Decrease) Other Changes in Reserves	65,081	225,578	644,475	935,134
Investment Income Allocations	864	632,158	(633,606)	(584)
Retirement and Division Transfers	(51,679)	51,679		
Total Other Changes in Reserves	(50,815)	683,837	(633,606)	(584)
Net Increase in Reserves After Other Changes	14,266	909,415	10,869	934,550
Reserve Balance Beginning of Year	669,545	5,268,359		5,937,904
Reserve Balance End of Year	\$683,811	\$6,177,774	\$10,869	\$6,872,454

The Schedule of Changes in Reserves shows the balance in each of the reserves and changes to those reserves' balances over the year. The Employee Contributions, Employer Contributions and Reserve for Expenses and Undistributed Investment income are components of the Defined Benefit Plan. A balance in the Reserve for Expenses and Undistributed Investment Income will be allocated at a future date.

Reserve for Defined Contribution Plan	Reserve for Health Care Savings Program	Reserve for Retiree Health Funding Vehicle	Reserve for Investment Services Program	Reserve for 457 Program	Total Reserve for Pension Trust Funds
\$17.169	\$10,742			\$8,170	\$109,214
24,931	Ψ10,11 1 <u>C</u>	\$78,809	\$700	φο, ττο	887,732
38,552	5,406	36,770	791	163	750,474
					95
80,652	16,148	115,579	1,491	8,333	1,747,515
18.532	1.787	13.071	106	21	598,752
10,002	300	10,071	100	21	760
759	144	521	11	6	25,853
					71
19,291	2,231	13,592	117	27	625,436
61,361	13,917	101,987	1,374	8,306	1,122,079
					/EQ.4\
					<u>(584)</u>
0	0	0	0	0	(584)
61,361	13,917	101,987	1,374	8,306	1,121,495
311,503	54,873	302,376	6,842		6,613,498
\$372,864	\$68,790	\$404,363	\$8,216	\$8,306	\$7,734,993

### Schedule of Average Benefit Payments – Defined Benefit Plan

Valuation Date December 31	Number of Retirees and Beneficiaries	Average Yearly Benefit
2002	17,538	\$12,030
2003	18,443	12,828
2004	19,271	13,607
2005	20,155	14,292
2006	21,464	15,026
2007	22,600	15,643
2008	23,832	16,447
2009	24,930	16,991
2010	26,930	17,879
2011	28,202	18,474

The Schedule of Average Benefit Payments shows the historical record and trends of retirees and the benefits they are drawing.

# Schedule of Retired Members by Type of Option Selected – Defined Benefit Plan December 31, 2011, Tabulated by Optional Form of Benefit Being Paid

Type of Benefit	Number of Retirees	Number as a Percentage of Total	Total Monthly Benefit
Beneficiary Draws 100% of Retiree's Benefit	8,754	31.0%	\$13,968,823
Beneficiary Draws 75% of Retiree's Benefit	1,729	6.1	3,988,259
Beneficiary Draws 60% of Retiree's Benefit	118	0.4	302,315
Beneficiary Draws 50% of Retiree's Benefit	4,514	16.0	8,262,584
Equated Option (Changing at Social Security Age)	327	1.2	222,992
5 Year Certain and Life	277	1.0	404,130
10 Year Certain and Life	406	1.4	607,194
15 Year Certain and Life	165	0.6	231,805
20 Year Certain and Life	303	1.1	421,410
Straight Life Allowance	11,609	41.2	15,007,054
Totals	28,202	100.0%	\$43,416,566

# Schedule of Benefit Expenses by Type – Defined Benefit Plan (Dollars in Thousands)

Fiscal Year Ended	Regular Benefits	Disability Benefits	Employee Refunds	Total
Dec. 31, 2003	\$212,612	\$8,526	\$3,542	\$224,680
Dec. 31, 2004	237,916	9,538	3,525	250,979
Dec. 31, 2005	263,839	10,308	4,158	278,305
Dec. 31, 2006	293,138	11,035	4,711	308,884
Dec. 31, 2007	326,666	12,791	5,058	344,515
Dec. 31, 2008	355,626	16,729	5,580	377,935
Dec. 31, 2009	391,613	18,254	9,510	419,377
Dec. 31, 2010	433,778	19,415	7,006	460,199
Dec. 31, 2011	476,993	20,812	7,915	505,720
Dec. 31, 2012	536,068	21,284	7,884	565,236

The Schedule of Benefit Expenses by Type shows the benefits paid as regular pension benefits, disability benefits and refunds for employees who have been terminated and requested refunds of their employee contributions.

Schedule of Retired Members by Type of Benefit – Defined Benefit Plan December 31, 2011, Tabulated by Optional Form of Benefit Being Paid

Type of Benefit	Number of Retirees	Number as a Percentage of Total	Total Monthly Benefit
Normal Retirement for Age and Service	22,721	80.5%	\$38,505,620
Non-Duty Disability1	947	3.4	1,027,026
Duty Disability <sup>1</sup>	395	1.4	431,307
Beneficiaries <sup>2</sup>	3,347	11.9	2,712,031
Non-Duty Death	733	2.6	680,349
Duty Death	59	0.2	60,233
Totals	28,202	100.0%	\$43,416,566

<sup>&</sup>lt;sup>1</sup>At age 60, these benefit types are converted to normal retirement for age and service <sup>2</sup>Includes EDRO alternate payees

Defined Contribution Plan Participants and Total MERS Participants

Fiscal Year	Number of Participants Total	Defined Benefit	% of Total	Defined Contribution	% of Total	Hybrid	% of Total
December 31, 2003	65,756	60,569	92.1%	5,187	7.9%	N/A	0.0%
December 31, 2004	67,140	61,841	92.1	5,299	7.9	N/A	0.0
December 31, 2005	68,915	62,748	91.1	6,167	8.9	N/A	0.0
December 31, 2006	71,572	64,545	90.2	7,027	9.8	N/A	0.0
December 31, 2007	72,932	65,556	89.9	7,376	10.1	N/A	0.0
December 31, 2008	74,400	66,586	89.5	7,814	10.5	N/A	0.0
December 31, 2009	75,605	67,254	89.0	8,351	11.0	N/A	0.0
December 31, 2010	78,343	69,707	89.0	8,636	11.0	N/A	0.0
December 31, 2011	91,666	81,926	89.4	9,193	10.0	547	0.6
December 31, 2012	93,462	82,331	88.1	10,210	10.9	921	1.0

Although MERS Defined Contribution Plan participants are not included in the annual actuarial valuation of the MERS Defined Benefit Plan, the trend in Defined Contribution participation is of interest. Numerous municipal divisions have established Defined Contribution Plan benefits for future new employees. Existing Defined Benefit Plan active members in those divisions were offered a choice of plans. The table above shows recent trends in Defined Contribution Plan participation and overall MERS participants.

# **MERS Member Benefit Changes**

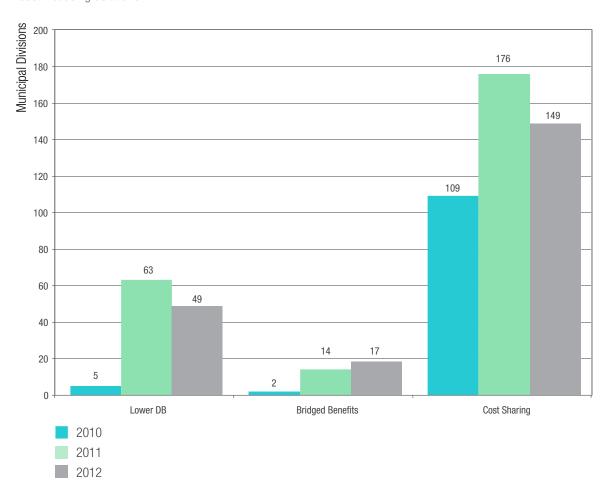
We continue to see an increase of requests from groups to reduce costs versus improve benefits. Groups are looking at merging divisions, exploring municipality consolidations and other MERS solutions. These charts show the number of divisions that have made changes in 2010, 2011, and 2012.

## **Cost-Reducing Solutions**

Cost Sharing: Include changes to employee rate changes without any other benefit changes Bridged Benefits: Allows groups to lower long-term liability on a going forward basis, leaving earned benefits unchanged

Lower Defined Benefit: New division with lower benefits is adopted for new hires

#### **Cost-Reducing Solutions**



The retirement plan changes show the number of municipal divisions which have shifted from Defined Benefit to Defined Contribution or Hybrid in their plan design. Many of these changes have been done to prospectively lower costs to the local government.

### Retirement Plan Changes

